Client User Manual (v1)

Page in progress for 1.0.0

Installation & Licence key

See [[LotAtc:Client Installation Guide]]

Quick Start

On this page, you'll learn the basics of LotAtc's use : [[LotAtc:QuickStart]]
For each feature, a more detailled page is linked, to go farther.
This page covers:

- Connection to the server
- Tactical view & symbology overview
- My first control
  - tactical role (GCI/AWACS)
  - approach role (GCA: Ground Controlled Approach)
- Dock system
- Main toolbar

Symbology and Labels

{TODO} (page détaillant l'un puis l'autre ou les deux ensemble = à voir / Az)
[[LotAtc:Symbology]] (non créée)
[[LotAtc:Labels]] (page de la version précédente, données à reprendre)

BRAAs use

{TODO} si le "my first control" du quickstart ne peut pas tout décrire, créer une page ou un § + complet ici.

Options

{TODO}

Shortcuts

To allow for a more efficient use, LotAtc features some keyboard [[LotAtc:Shortcuts]] that you may want to learn.

QuickStart

Page in progress for 1.0.0
This page will teach you the basics of LotAtc's use.
For each notion/feature, one or more detailled page(s) is(are) linked, to go farther.

Connection to the server

Execute LotAtc 4 DCS client and wait for the "Not connected" message to appear, then click on the [Connect] button of the main toolbar to open the connection window:

Enter the **server address** (IP or URL/DNS), set the TCP port if using a non-default one (default port is 10310; LotAtc uses TCP only).

> *The server address is unique: the same address works for LotAtc and for DCS clients. One server to rule them all!*

Then choose your **coalition** by clicking on the blue or red square (active coalition is highlighted), and enter the **password** needed to access the chosen coalition.

> *Passwords are set by the server; ask the host what he set. Default password are: "blue" for the blue coalition, and "red" for the red coalition; how original is that, huh?*

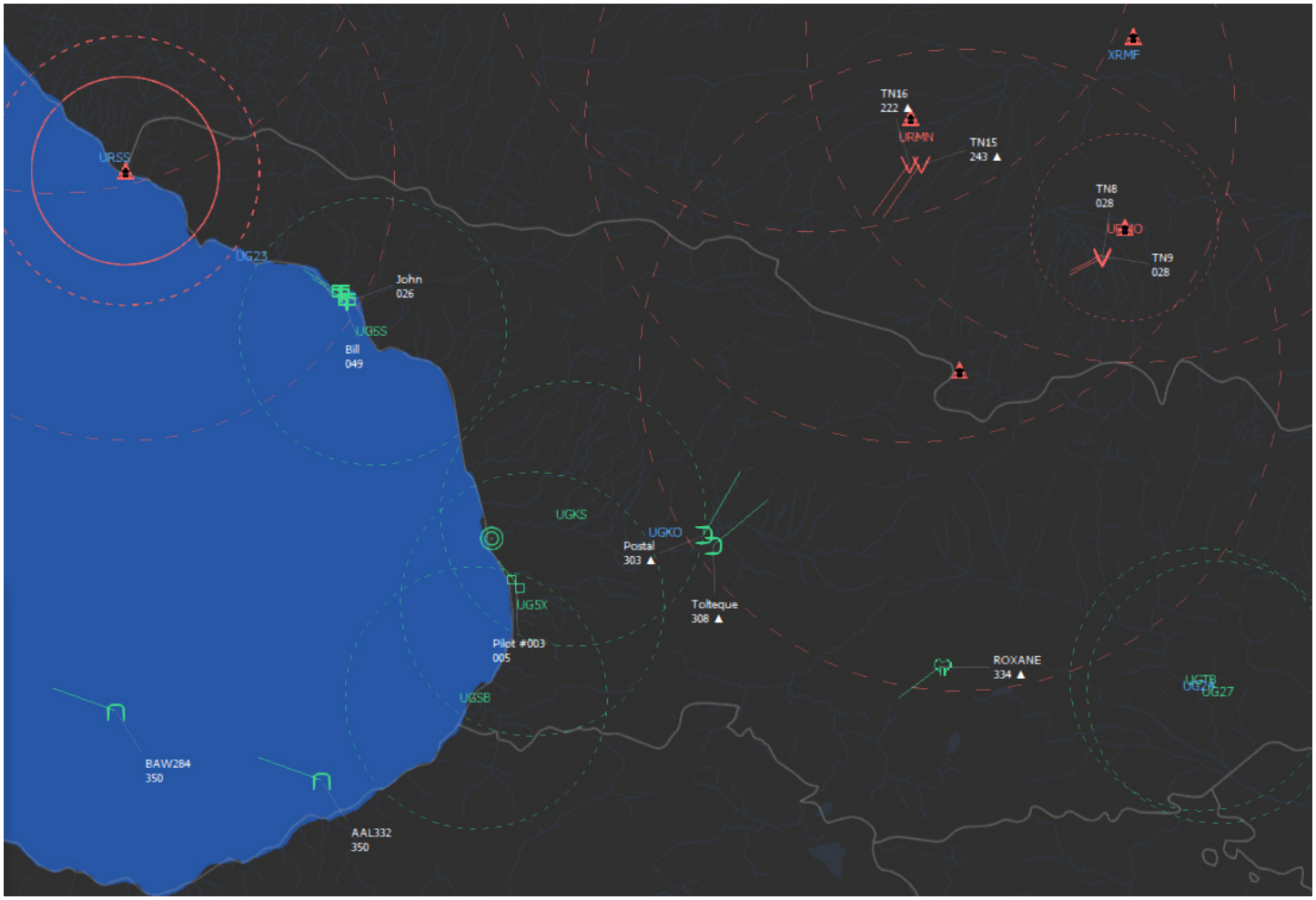
Finally, enter the **pseudo** (login/nickname) you want to use (your pseudo will be displayed in the ATCs list and when using the chat feature).

Then, click on the **[Connect]** button at the bottom of the connection window to go online.
LotAtc also provides a Bookmarks system for saving the connection data if you use the same server often. Please refer to the [[LotAtc:Connection Bookmarks]] page about this.

Tactical view

As soon as you're connected, if the DCS server is un-paused, the *picture* (tactical situation) and mission data should appear on your display.
Now, you're an active controller: it's time to work! Remember that what you can see depends of the [[LotAtc:Detection Profiles|detection profile]] set by the server.

Here is a (quite busy) example of the tactical view:



Above the background **map** (settings: see [[LotAtc:Maps]] page), you can see **aircraft**, **airbases** and **ground emitters** (radars). Refer to next paragraph to discover the symbology displayed.

- The aircraft are seen because they're detected by an ally asset, such as an AWACS or EWR.
- The airbases are seen because everybody knows where they are.
- The ground units are seen if they are radar emitters: then our AWACS or EWR detects their emissions and triangulate their position; LotAtc also display their own detection range based on a "threat library" (here, the DCS own database).

More details about who "sees" what and the different settings offered by LotAtc on the [[LotAtc:Detection Profiles]] page.

Symbology Overview

All examples in this paragraph are part of the tactical view shown above.

Symbology Overview		
Example 1: Aircraft Symbology	**Example 2: Airbases and Allied Fighters**	**Example 3: Ground radar and Bandits**
Aircraft.jpg	AirbasesFighters.jpg	RadarBanditsNalchik.jpg
An aircraft is displayed in LotAtc shows: - A Symbol showing the aircraft position and nature As a controller, it's your job to set the symbol used based on the nature of the detected aircraft (that you have to "guess" from the tactical situation); to do this, click on the aircraft's symbol and choose from the drop-down list	*- Airbases are displayed with their 4-caracters codes, and a base shematics (runways, taxiways...) when you zoom in. The color of the code depends on the coalition of the base: allied color (here: green) = allied airbase; blue = neutral; ennemy color (here: red) = ennemy airbase.* *Above two airbases are displayed (UGKS: Senaki*	*{TODO} (Az)* ** radars* ** ships* ** circles* ** labels* ** bandits*

of the properties dock. The symbol set is automatically shared among allied controllers. - A Velocity Vector showing the aircraft heading and speed; velocity vector lenghts can be relative to time or pure speed, learn about this in the [[LotAtc:Options]] page. - A Label (and its link to the symbol); the label displays various informations about the aircraft. You can rotate the label around the aircraft with LSHIFT+click or LCTRL+LSHIFT+click. You also have the ability to personnalize the label associated with aircraft, please refer to the [[LotAtc:Labels]] page to learn how to do this.	Kolkhi and UGKO: Kutaisi); UGKS is allied, UGKO is neutral. Allied airbases also have a detection range displayed as a discontinued circle around them; this is where the airbase's own approach radar sees. You can take control of an approach at allied airbases. - This example also shows 2 allied fighters (notice the different symbol for the previous example) with their pilots nicknames. They are climbing as shown by the upward-pointing arrows next to their altitude (displayed in FL).	

For a more comprehensive description of LotAtc's Symbology, please refer to the dedicated [[LotAtc:Symbology]] page.

My first control

{TODO} (Leb)

Tactical role (GCI/AWACS)

{TODO}

Approach role (GCA: Ground Controlled Approach)

{TODO}

Dock system

{TODO} + voir si ce § et le suivant ne devraient pas être regroupés sous un "chapeau" LotAtc's user interface ?

Main toolbar

{TODO}

Files

TacticalView.jpg	146 KB	02/15/2015	Azrayen
Aircraft.jpg	17.3 KB	02/15/2015	Azrayen
AirbasesFighters.jpg	21.4 KB	02/15/2015	Azrayen
RadarBanditsNalchik.jpg	22.4 KB	02/15/2015	Azrayen
ConnectionWindow.jpg	35.7 KB	02/24/2015	Azrayen

Connection Bookmarks

This page is WIP for LotAtc v1.00
The Bookmarks system is for connecting LotAtc client to servers you regularly use, without re-typing all login informations each time.

Creating a Bookmark

To create a Bookmark, you need to type in all login informations then, instead of clicking on the [Connect] button:
1/ **type** a name for your Bookmark
2/ click on the **[Bookmark current]** button.

This will save the server address, the server port, the chosen coalition and its password, and your login/pseudo into a new Bookmark.
The Bookmark's name will allow you to quickly know which is which in the Bookmarks drop-down list.

Using a Bookmark

Really simple! Just **select** the desired Bookmark from the drop-down list: this will fill the required fields in the connection window; then click **[Connect]** and that's it!

Deleting a Bookmark

If the server changes its settings (address, password...) of if you want to change your login/pseudo you'll have to create a new Bookmark.
We also advise you to delete old Bookmarks to avoid cluttering the drop-down list with obsolete Bookmark.

To delete a Bookmark, **select** it from the drop-down list and click on the **[Delete current Bookmark]** button. Please note that there is no confirmation window, the Bookmark is "simply" and immediately deleted.

Introduction

All the information you'll need to be able to use ***LotAtc 4 DCS*** is here.
This documentation made for 0.9.2 is currently in progress for 1.0.0 so some new features will appears, and some void pages can appear too

What is LotAtc?

LotAtc is a client + server software witch is connected with DCS World Simulator and provide users to get an ATC/CGI view of the battle. You can help human pilots to accomplish their mission by radioing them a tactical view!
At this time, LotAtc 4 DCS is for DCS multiplayer only; as an ATC, you may radio your instructions & informations to pilots using a voice software such as TeamSpeak, Mumble... etc.

LotAtc originally stands for "Lock-On tiny ATC" (back in 2006!) and later "Lock-On tactical Air Traffic Control" to emphasize the importance of the tactical part.
The original name was retained for the current *LotAtc 4 DCS* version as it is well known by the online community.

{{youtube(gCpPCjThfZE)}}

Feature list of current version and Roadmap

Kindly refer to the [[Features]] page.

How do I get LotAtc 4 DCS?

LotAtc 4 DCS *Client* application requires a license to be purchased. The licence costs €20.00 if you're an individual or a non-profit organization.
See the **[[Get Client]]** page for more information.

LotAtc 4 DCS *Server* application is free to use. You can get it here: [[Download]].

Need help?

Online documentation

Installation

- [[Client Installation guide]]
- [[Server Installation guide]]

User Guide

In general & for missions builders:

- [[Detection Profiles]]

For server:

- [[Server User Manual]]
- [[Server Configuration]]
- {{faq_server}}

For client:

- [[Client User Manual]]
- [[Languages|LotAtc Languages]]
- [[Client FAQ]]

More help?

- Use our Forum

Client Installation guide

Buy a licence for LotAtc 4 DCS

Please see the [[Get Client]] page.

Installation

Installing the application

Note you don't need DCS World or any module to execute the LotAtc client, it's a stand-alone software !

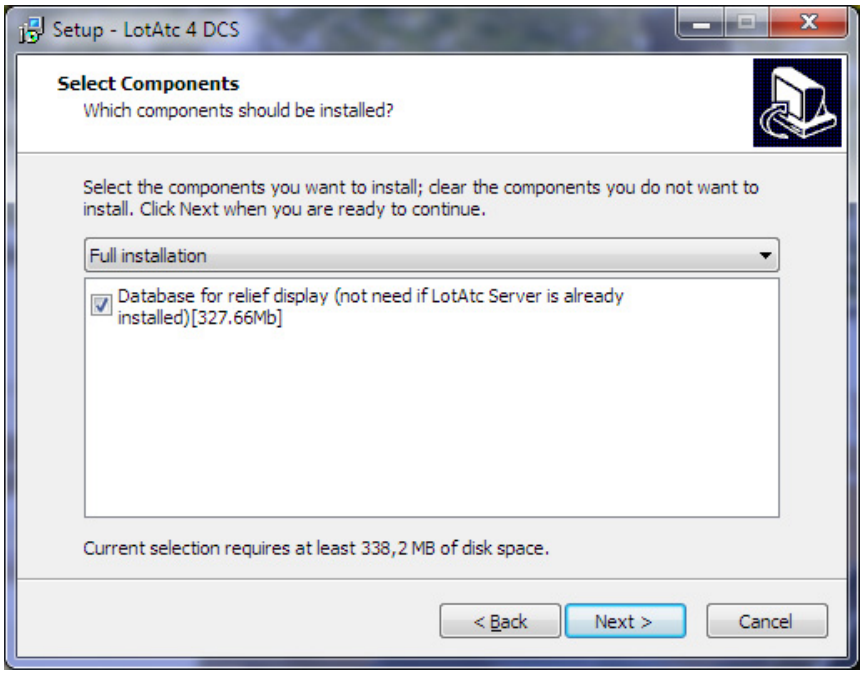
After downloading the 32 or 64 bits installer (depending on your system configuration, if you do not know, take the 32bits it will work in all cases), execute the "Setup_LotAtc4DCS_xxx_xxbits.exe" and follow the installation wizard.

During this step, you have to accept the end-user licence agreement and choose a destination folder for the installation of LotAtc 4 DCS.

> *Default path is C:\Program Files\LotAtc 4 DCS*

LotAtc 4 DCS client will need:
- about 340MB of disk space for the client software itself, and
- an additionnal 330MB of disk space for the Relief database (terrain mesh, shared between LotAtc 4 DCS server and LotAtc 4 DCS client) put into {UserHome}\LotAtc 4 DCS\Data\ folder.

Regarding the Relief database in your LotAtc 4 DCS client, LotAtc installer will ask you if you want to download & install it:


Setup - LotAtc 4 DCS
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Full installation
Database for relief display (not need if LotAtc Server is already installed)[327.66Mb]
Current selection requires at least 338,2 MB of disk space.
< Back
Next >
Cancel

- If you already have installed LotAtc 4 DCS server (or intent to install it), you don't need to download & install the Relief database through the client installer: the database is mandatory for the server, and is included in its installer. Untick the checkbox.
- If you have not installed LotAtc 4 DCS server (and don't intent to install it), you may choose:
  - to take the Relief database, and get the elevation data of the mouse cursor point: tick the checkbox,
  - or not to take it, and have elevation indicated as zero anywhere on the map: untick the checkbox.

Network authorization

LotAtc 4 DCS client communicates with LotAtc server through the (default) TCP 10310 port. Ensure to allow LotAtc 4 DCS client to use that port to reach the server.
Refer to your firewall documentation for how to do that. Most firewalls will ask permission on the first launch.

> *Being a client-only application, LotAtc 4 DCS client doesn't need port forwarding (NAT) through your router. Only servers need to do that.*

First launch, Demo mode & Licence key

On first launch, LotAtc 4 DCS client will display a "Not Registered" mention at the bottom of the window, as you have not yet provided it a licence key:

LotAtc 4 DCS - 0.9.0(Not registered) - 64 bits
LotAtc 4 DCS
By DART
Not registered
Put your lotatc.key in the C:/Users/ /LotAtc 4 DCS Data/Client directory
If you do not have a license key click HERE to buy one!

You can now either:

- Use LotAtc as it is, in **demo mode** (unregistered), in which you'll be limited to one connexion and 10' of use per execution of DCS/LotAtc server per client.
- Or, if you've bought a licence, you should now copy/paste the **lotatc.key** file you received by e-mail following your [[Get Client|purchase]] *(it can take up to 24h)* into your **{UserHome}\LotAtc 4 DCS\Data\Client** folder.

This folder should have been automatically created by the first launch of the newly installed application; alternatively, you may create it manually.
{UserHome} is your windows account personnal folder. If you have a default windows installation then:

- with Windows XP, {UserHome} is C:\Documents and Settings\{your_windows_username}\
- with Windows Vista or 7, {UserHome} is C:\Users\{your_windows_username}\

The next time(s) you'll launch LotAtc 4 DCS, you'll not get the "Not Registered" message anymore, and you'll be able to use the application without the demo limitations.
Refer to the [[client user manual]] to see how to do this and have fun!

Uninstallation

Uninstalling LotAtc 4 DCS client is automatic. Execute the uninstaller via Windows start menu (or the .exe directly in the LotAtc client folder).

Please note that the uninstaller removes all files in the client installation directory, but will not delete the relief database, nor your licence key that are in another folder. You may then uninstall and re-install LotAtc 4 DCS on the same computer without having to worry about the database or your licence.

> *If you reinstall your system (Windows), don't forget to make a back-up of the licence key (e.g. keeping the mail, have a back-up copy...).*

> *If for whatever reason, you want to remove this licence key file too: do it manually. If you do so, don't forget to save it elsewhere if it's your intention to re-install LotAtc 4 DCS client later.*

Problems/questions

See [[Client FAQ]]

Files

lotatc_relief.db_install.jpg	67 KB	11/17/2013	DArt
lotatc_not_registered.jpg	90 KB	11/17/2013	DArt

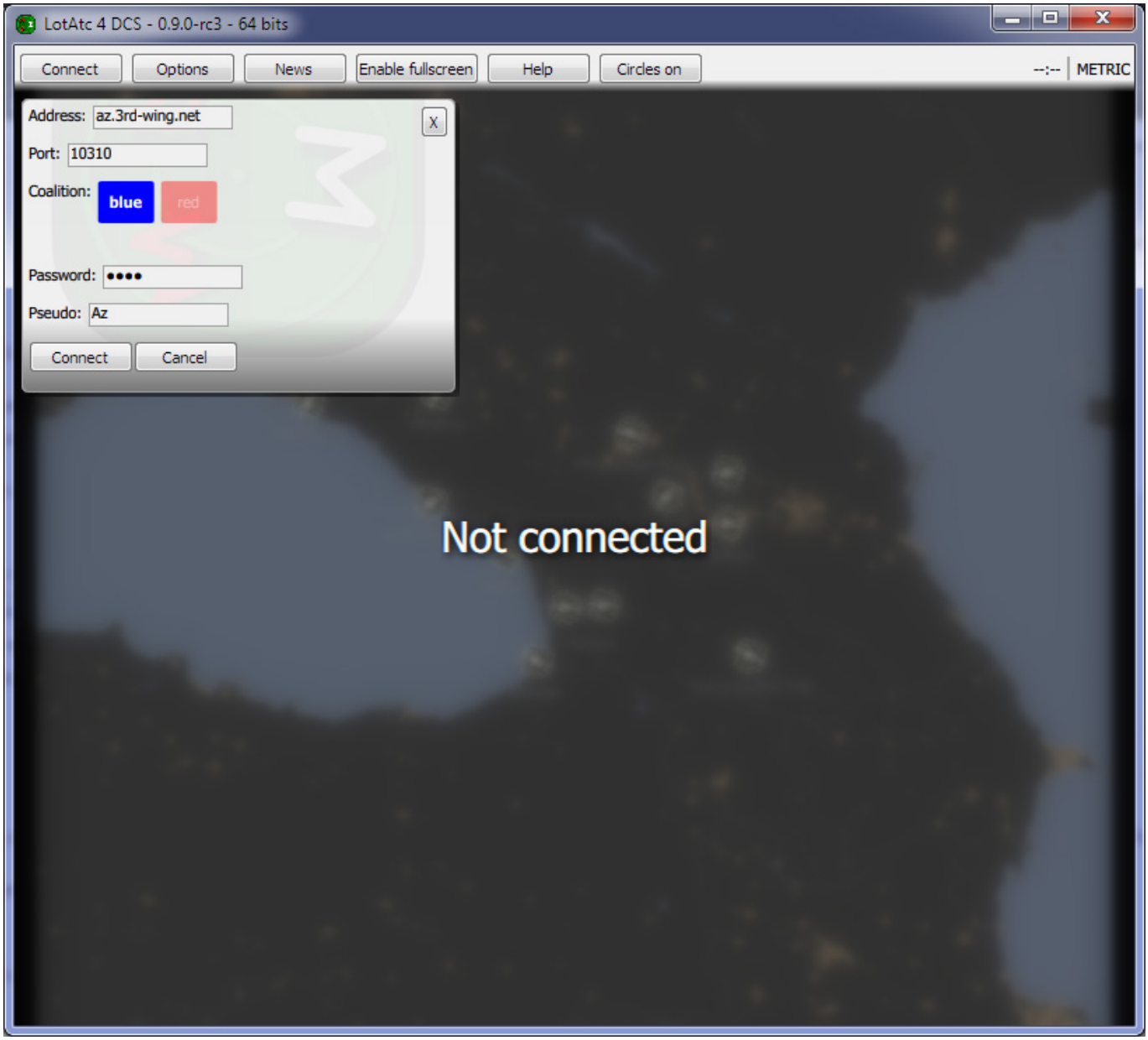
Client User Manual

Installation & Licence key

See [[Client Installation Guide]]

Connection

Execute LotAtc 4 DCS client. After loading, a "Not connected" message will appear.
Click on the [Connect] button of the main menu bar, you'll get this:



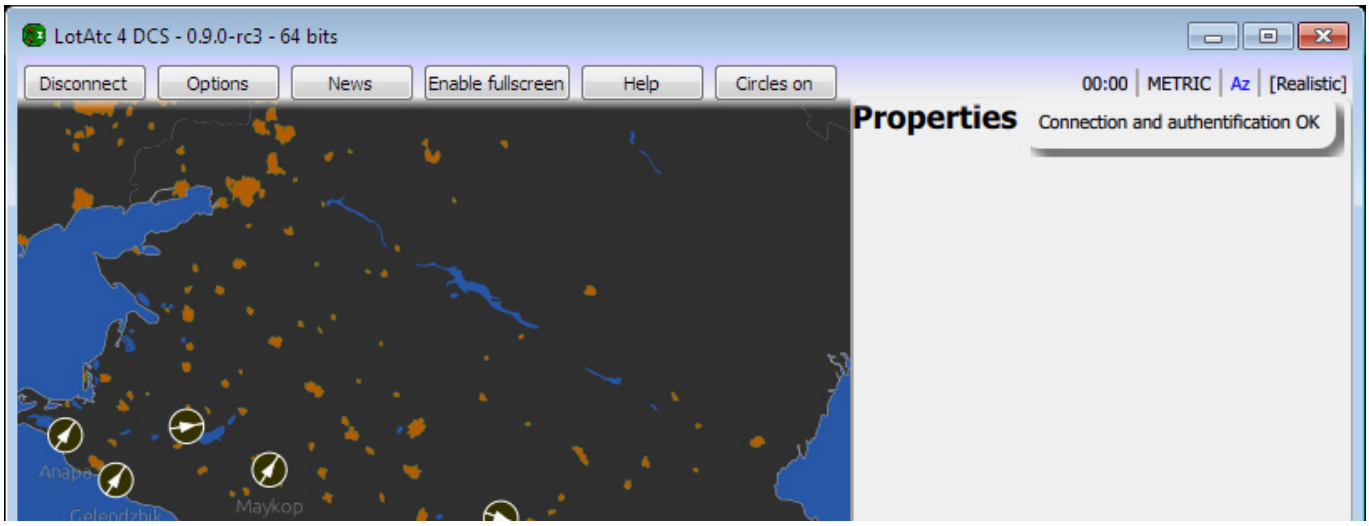
Enter the address (IP or URL/DNS) of the server you want to connect to, set the TCP port if using a non-default one (default port is 10310; LotAtc uses TCP only).

Choose your coalition by clicking on the blue or red square (active coalition is highlighted), then enter the password needed to access the chosen coalition (passwords are set by the server; ask the host what he set).

> *Default password are: "blue" for the blue coalition, and "red" for the red coalition. And yes, we won an imagination contest with that (a long time ago).*

Finally, enter your Pseudonym (will be displayed when using the chat feature).
Then, click on the [Connect] button of the connection window.
Once the connection is established, you will be notified by LotAtc displaying the following things:

- A non-persistent message saying "Connection and authentification OK" (top right of the radar display),
- Your pseudonym and the active [[Detection Profiles|detection profile]] at the top right of the main UI bar, and said bar will be lightly colored (the color of the pseudo and the bar depends on the coalition you're connected to).
- The map is active ("bright" colors) and the geographical coordinates of the mouse cursor are dispayed in the bottom left corner of the radar screen.



Seconds later, if the DCS server is un-paused, the *picture* (tactical situation) and mission data should appear on your screen. Now, you're an active controller: it's time to work!

> *Remember that what you can see depends of the [[Detection Profiles|detection profile]] set by the server.*

Using LotAtc client

Radar display

What does LotAtc show up?

Well, it displays, over a map (background), the units detected in the DCS mission. Which units are shown depends on the [[Detection Profiles|detection profile]] enforced by the server and, of course, the tactical situation at the time. The radar screen is refreshed every 2 seconds by default.

By default, friendly units (= from your coalition) are shown in white, and enemy coalition units are displayed in red. See below how to change that if you wish.

LotAtc is able to display:

- Mission data, with:
  - current weather (only if static weather - we're looking what's possible with dynamic weather, but at this time the answer is 'nothing useful')
  - time from DCS
  - bullseye position (your coalition's one only, of course)
  - geographical coordinates, position relative to the bullseye, and elevation of the point at the mouse cursor location.

> *NB: elevation requires the relief database installed; this database is automatically installed if you have LotAtc 4 DCS server module, or you can choose to download and install it when installing LotAtc 4 DCS client stand-alone application.*

- Aircraft units, with:
  - a symbol that may vary depending on the [[Detection Profiles|detection profile]] enforced by the server, the nature or mission of the aircraft, or simply the controller's choice (you or another colleague logged on the same coalition),
  - a velocity vector showing where the aircraft is headed for; the lenght of the vector is either:
    - showing where the aircraft will be in X seconds if it doesn't change course nor speed
    - or proportional to the aircraft ground speed measured by LotAtc,
  - a customizable label with various data about the aircraft (see the [[Labels]] page for more details).

- Ground and Sea units, with:
  - a SAM symbol for Ground units, or a ship symbol for Sea units,
  - a label indicating their type, displayed only when you're hovering your mouse cursor above the symbol.

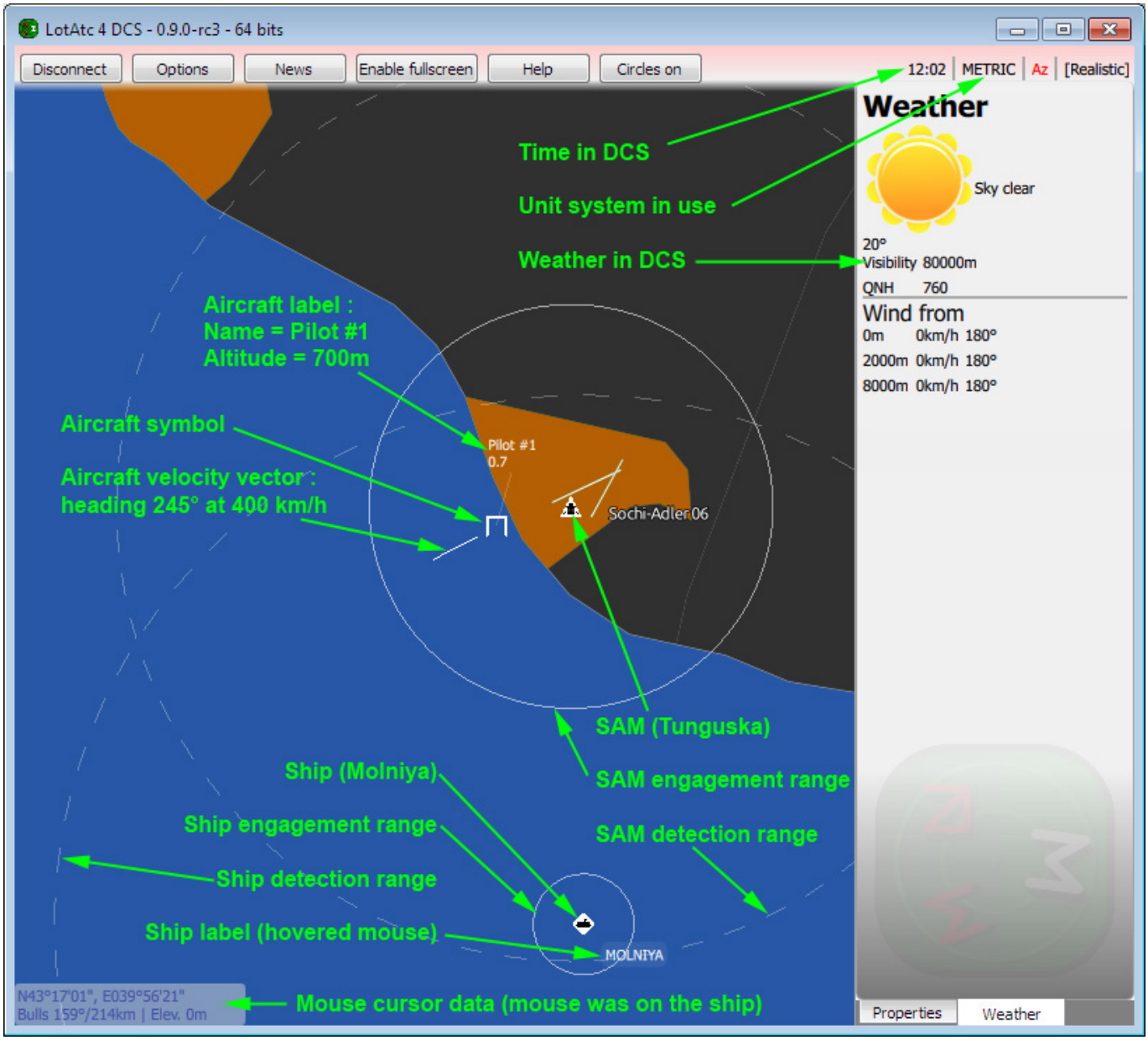
- Detection and Engagement circles, with:
  - the detection circle (discontinuous line) that allows the ATC/GCI to assess units max detection range (AWACS, ground- and sea-based radars),
  - the engagement (threat) circle (continuous line) that allows the ATC/GCI to assess units max engagement range (ground- and sea-based SAMs).
  - You may hide those circles if needed to declutter your radar screen: See 'Key shortcuts' below.

Important:

> *Above ARCADE profile, the engagement (threat) circle is displayed **only** if the launcher is the same vehicule as the radar. LotAtc simulates an ESM capability, and you cannot know where precisely is a launcher if it doesn't emit radar waves.*
> *Please refer to the [[Detection Profiles]] page to learn more about what types of SAMs (and their circles) are displayed or not, and why.*

Let's see a simple example:

Here, we see an aircraft taking off from Sochi Adler RWY 24, a SAM protecting the airbase, and a ship loitering off the coast.
All the units are white, which is the default color for friendly units (ennemies are red by default); this means here they all belong to our side (our coalition).



> *On this image, the green texts and arrows are legends. Those do not actually show up in LotAtc.*

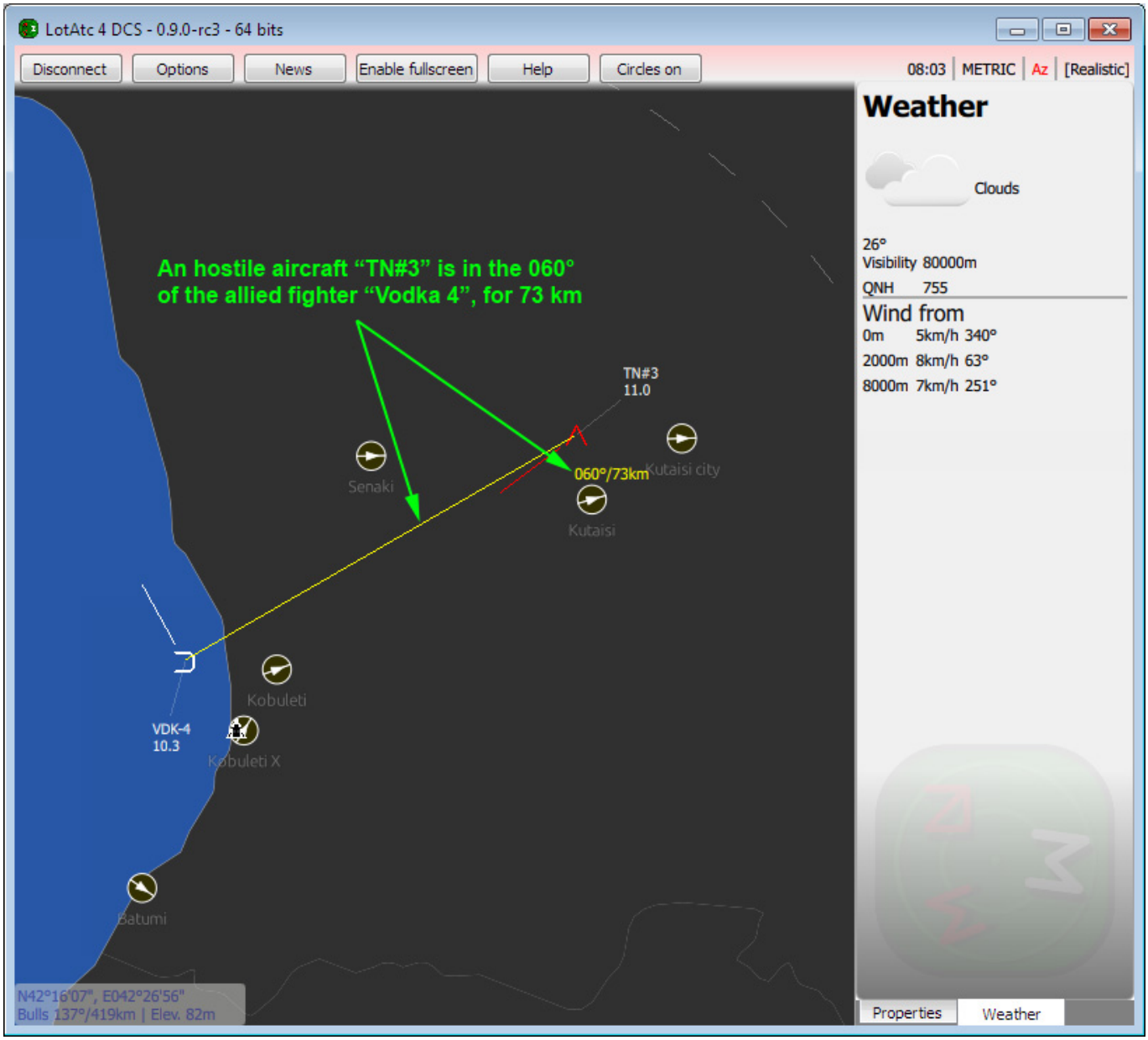
Mouse commands

Your mouse is your most used tool in LotAtc 4 DCS. Use it to:

- Move the map: Left click + drag
- Zoom the map: Mouse wheel
- Display an aircraft's 'detailled' (hovered) label: Hover your mouse cursor over its label
- Display a ground or sea unit's type label: Hover your mouse cursor over its label
- Rotate an aircraft label by 45° increments around its radar plot (to declutter the display):
  - Maintain [Shift] and Left click on the label or the aircraft symbol for clockwise

- Maintain [Shift+Control] and Left click on the label or the aircraft symbol for anticlockwise
- Display and Set the properties (name, symbol) of a displayed unit: Left click on the unit then use the Properties panel on the right side of your display (this is not available in ARCADE profile)
- Draw a bearing/range calculation line: Right click+drag
- Draw a persistent BRAA: Ctrl+right click
- Left click in mouse cursor data area (bottom left of map) to reduce it

About the latter feature, which is most useful for tactical controllers, here is how it looks:



> *Again, on this image, the green texts and arrows are legends and do not actually show up in LotAtc.*

Key shortcuts

Key shortcuts allow controllers to change some settings instantly, without having to dig into the option menu:

Key	Description
Alt+N	Change unit system metric/imperial
Alt+C	Show/hide detection/threat circles
Alt+L	Show/hide labels background

Options Menu

General (Languages)

This is where you'll choose what language LotAtc 4 DCS should use. Restarting LotAtc is mandatory for any change made here to be applied.

Thanks to volunteer members of the community, several languages are now available for LotAtc 4 DCS client. Thanks to all involved!

Please refer to the [[Languages]] page for more details, including the list of available languages at this time.

Map

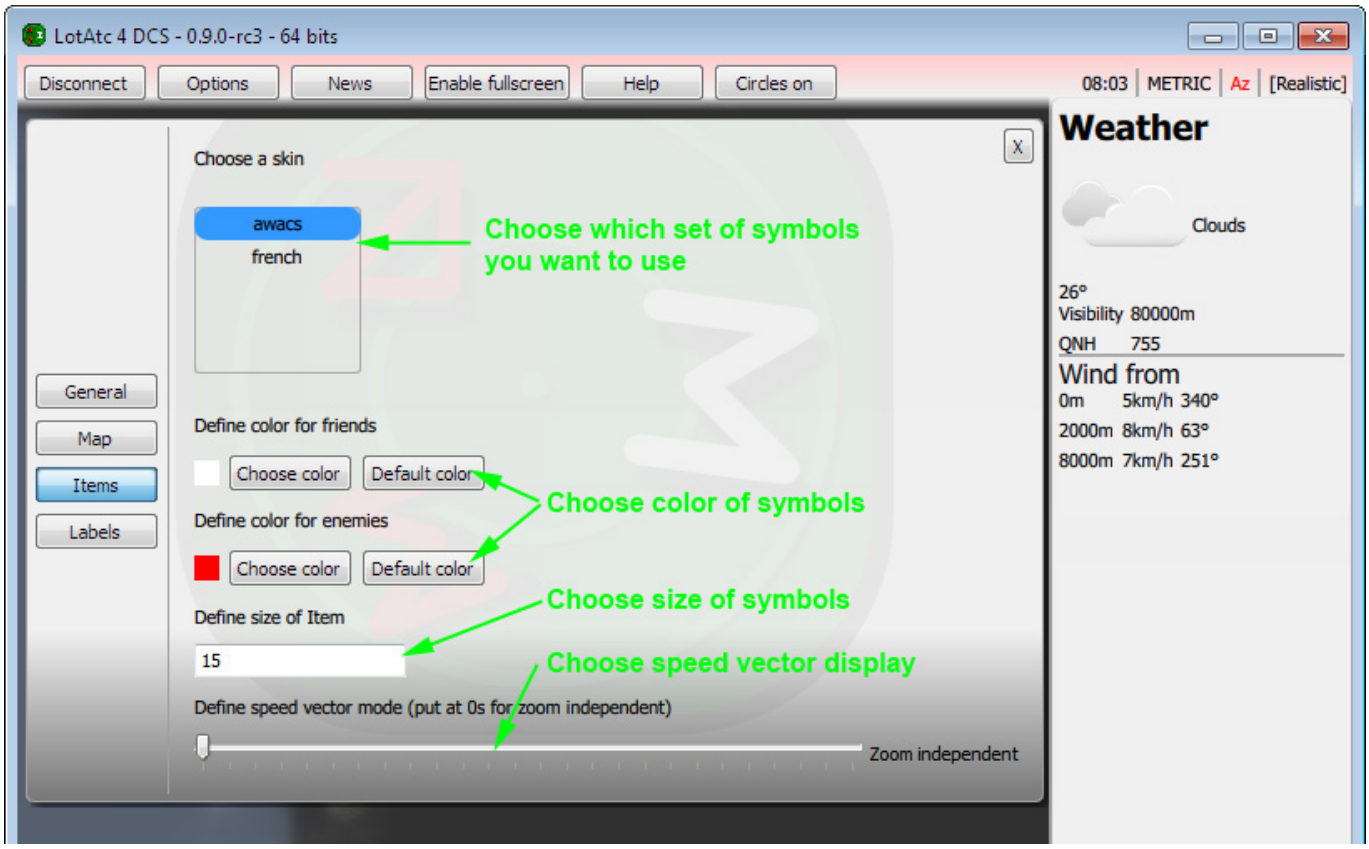
The map option menu allows you to choose which map is used as a background for LotAtc 4 DCS radar display.
You may choose between four maps:

Map name	Description
classic	default map; it shows land/sea, main lakes and urban areas
simple	same as the default one, but without urban areas
green	same as the simple one, but land is green instead of dark grey
relief	(new in 0.9.0): it shows the relief of the terrain, the main lakes/rivers, and states borders

LotAtc is built to allow more maps to be easily included. This will be documented later.

Items

The items option menu allows you to set LotAtc symbology principles.
Here you'll be able to:
- cycle between the "AWACS" and the "French" sets of symbols (to display different aircraft/missions) (see [[Detection Profiles]] for more details about available individual symbols)
- set the colors you want to use for friendly and enemy units (defaults are: Friendly = White / Enemy = Red)
- set the size of the symbols (change it if symbols are too tiny to be read on your screen; default size is 15)
- configure how you want the aircraft speed vectors to be displayed between:
  - the zoom independent mode (slider fully to the left), where the speed vector lenght is relative to the measured ground speed of the aircraft, and independent of the zoom of the map
  - the time mode, where the far end of the speed vector shows where the aircraft will be in X seconds (set X with the slider); by nature, the speed vector lenght then varies depending on the zoom level.



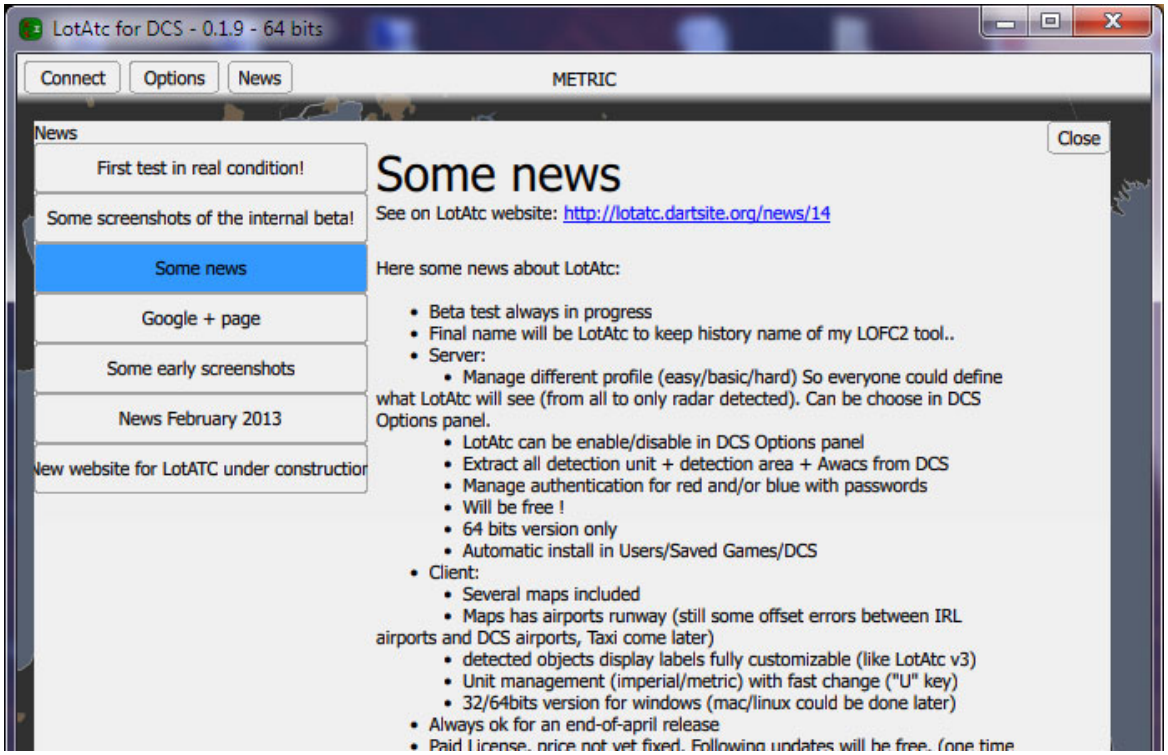
Labels

This option allows you to set what data the aircraft labels will display.

See the [[Labels]] page for more details about this.

News menu

The [news] button opens a window displaying last news from the developper. There will be announced the version upgrades (no auto-updater for LotAtc). The news are also visible on the LotAtc website: http://lotatc.dartsite.org/projects/lotatc/news


LotAtc for DCS - 0.1.9 - 64 bits
Connect
Options
News
METRIC
News
Close
First test in real condition!
Some screenshots of the internal beta!
Some news
Google + page
Some early screenshots
News February 2013
New website for LotATC under constructior
Some news
See on LotAtc website: http://lotatc.dartsite.org/news/14
Here some news about LotAtc:
• Beta test always in progress
• Final name will be LotAtc to keep history name of my LOFC2 tool..
• Server:
• Manage different profile (easy/basic/hard) So everyone could define what LotAtc will see (from all to only radar detected). Can be choose in DCS Options panel.
• LotAtc can be enable/disable in DCS Options panel
• Extract all detection unit + detection area + Awacs from DCS
• Manage authentication for red and/or blue with passwords
• Will be free !
• 64 bits version only
• Automatic install in Users/Saved Games/DCS
• Client:
• Several maps included
• Maps has airports runway (still some offset errors between IRL airports and DCS airports, Taxi come later)
• detected objects display labels fully customizable (like LotAtc v3)
• Unit management (imperial/metric) with fast change ("U" key)
• 32/64bits version for windows (mac/linux could be done later)
• Always ok for an end-of-april release
• Paid License, price not yet fixed. Following updates will be free. (one time

FAQ

{{faq_client}}

Files

lotatc_news.jpg	98.8 KB	04/21/2013	Azrayen
lotatc_connect_0.9.0.jpg	82.6 KB	11/17/2013	DArt
lotatc_connection_OK_0.9.0.jpg	65.7 KB	11/17/2013	DArt
lotatc_bearing_range_0.9.0.jpg	114 KB	11/17/2013	DArt
lotatc_items_0.9.0.jpg	122 KB	11/17/2013	DArt
lotatc_display_legend_0.9.0.jpg	185 KB	11/17/2013	DArt

Labels

Ground units and Ships labels are not customizable:
- They are displayed only when you hover your mouse cursor above the unit
- They only display the type of the unit.

Aircraft labels, on the other hand, are very customizable:
- Each user (controller) may say which data he wants to be displayed, and in what order/presentation
  - There are independent settings for friendly and ennemy aircraft
  - There are independent settings for both the normal mode (displayed by default) and the hovered mode (when you put your mouse cursor above the label, to get more (or different) data).
- The data themselves are automatically shared among the controllers of the same coalition.
  - Whenever a data value is updated by a controller (e.g. the name or symbol used for an aircraft), all his "colleagues" will get the information at the next refresh of their own radar display.

Background

You can choose to display or not the background of the label. This can be changed using the **Alt+L** key of your keyboard, in LotAtc's main view, or in the options menu.

Rotate labels around aircraft

To declutter the labels, you can rotate the label around the symbol with 45° angle increments.
To do this, use:
- [Shift] + left-click either on the aircraft symbol, or on its label to rotate the label clockwise
- [Ctrl] + [Shift] + left-click either on the aircraft symbol, or on its label to rotate the label anticlockwise.

Beyond that manual setting, the labels will keep their positions relatively to the aircraft vector: If you put the label of a southbound plane on its left, then if this aircraft turns and heads north, the label will accompany the move and be displayed on its right side.

Displayed Data

Labels have two states: normal and hovered. The hovered state is shown only when you place the mouse cursor over the label; when you're not doing this, the label will display the normal version.
By default, the labels will display the following data:

	Friendly aircraft	**Ennemy aircraft**
Normal state	Callsign (up to 10 characters) Altitude (short format)	TN# (up to 10 characters) Altitude (short format)
Hovered state	Callsign Altitude (long format) Type & Ground speed Position (from Bullseye)	TN# Altitude (long format) Type & Ground speed Position (from Bullseye)

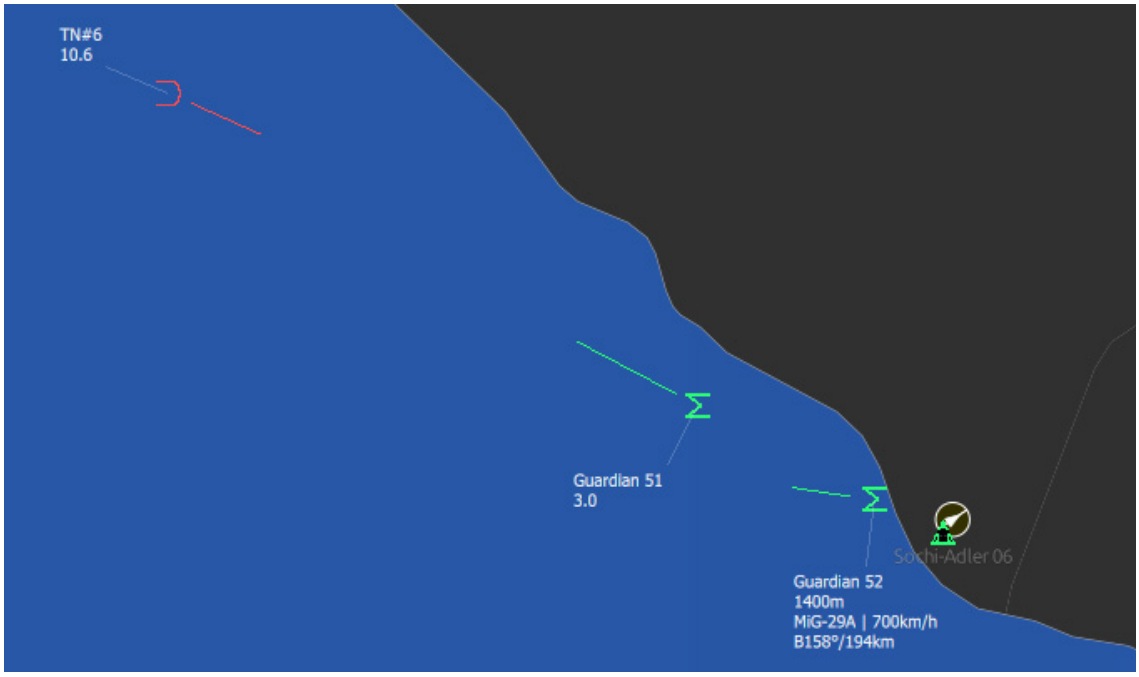
Most of the time, you'll want to keep the "normal" label as short as possible, to avoid cluttering your radar display.
The hovered state label will then allow you to know more about a specific aircraft, by pointing your mouse cursor at it specifically.

You may set what data the labels will display, by replacing the default text by yours. You may set independantly the normal and hovered state, for friendly and ennemy aircraft.

> *Your settings are automatically saved, and will be re-used the next time you'll use LotAtc 4 DCS.*

Example

The bandit aircraft (TN#6) and the first of two GAI fighters climbing to intercept it ("Guardian 51") display normal labels with only the callsign/TN# and the altitude (short format); meanwhile, the controller hovered its mouse cursor above the second GAI fighter label ("Guardian 52"), which then dispays the hovered state, with more data: aircraft type, speed, position from the bullseye.



Available Attributes table

The following table lists the available attributes in LotAtc 4 DCS. When you set an attribute, LotAtc will display the value for this attribute, in the context of the mission.
Examples are provided for a better comprehension:

Attribute	Name	Description	Example	
			friendly	**ennemy**
%(name)	Unit Name (or TN)	Shows the aircraft's pilot name or the radar track number allocated to this aircraft [[Labels#Notes about the aircraft's pilot Name attribute|See notes]]	DArt	TN#1532
%(group_name)	Group Name (if available)	Shows the aircraft's group name if available	Shark	-
%(type)	Unit Type	Shows the aircraft unit type (or UNK for unknown if ennemy)	A-10C	UNK
			metric	**imperial**
%(heading)	Heading	Shows the aircraft heading (true heading) use true/mag/truemag option for true/magnetic deviation correction (default is auto)	015°T	015°T
%(alti_long)	Altitude long format	Shows the aircraft altitude in long format (including unit)	2300m	7500ft
%(alti_short)	Altitude short format	Shows the aircraft altitude in short format	2.3	075
%(vert_indic)	Vertical indicator	Displays an arrow showing if the aircraft is climbing, descending or [optionnal] stable [[Labels#Note about the Vertical Indicator|See notes]]	□ □ [□]	
%(gs)	Ground Speed	Shows the aircraft GroundSpeed (only the numeric value)	543	250
%(gs_short)	Ground Speed in short format	Shows the aircraft GroundSpeed (only the numeric value with 2 numbers only (no unit represented)	54	25
%(gs_unit)	Ground Speed Unit	Shows the unit of the aircraft GroundSpeed	km/h	kt
%(posit_bulls)	Position to BullsEye	Shows the unit's	*B090°/63km*	*B172°/203Nm*

		heading/distance relative to the coalition's BullsEye		

Notes about the aircraft's pilot Name attribute

The aircraft's pilot **name** is from DCS mission editor for IA-piloted aircraft, and from MP login name for Human-piloted aircraft.

You can "trim" the value of the %(name) attribute using this syntax: %(name|3)

> *This will display only the firt 3 characters of the name. You may change the max number of characters at will.*

The Name will be replaced by the Track Number for ennemy aircraft in Basic and Realistic [[detection profile|Profiles]]. See below for details.

Note about the Radar Track Number

Aircraft from your coalition are deemed cooperative in LotAtc 4 DCS: you can display their (pilot's) name/callsign and (aircraft) type, allegedly known via IFF system (even if IFF system is not modelised into DCS World, for now).

On the other hand, ennemy aircraft won't cooperate and let you know who they are! Your radar systems will detect them, you'll know that there is an aircraft here, you'll be able to measure its altitude and speed, but your radar won't be able to know who/what it is.

To avoid confusion, it's useful to have a unique "ID" as a reference for each (ennemy) aircraft. For this purpose, LotAtc uses Radar Track Numbers.

> *A **Radar Track Number** (or TN for short) is a unique ID on 4 digits that the radar system of an AWACS aircraft automatically allocate to each new (airborne) radar track it detects.*

LotAtc 4 DCS simulates the automatic allocation of a Radar Track Number, and uses it in place of the aircraft's pilot "name" when it doesn't have another (real) name to use, so that it is displayed as part of aircraft labels (it will show the number with the prefix "TN#").

Typically, this Radar Track Number will be displayed for ennemy aircraft in BASIC and REALISTIC profiles.

It will allow a better SA and/or coordination between different controllers. The controllers can change the "name" of the aircraft at will (be it a pilot's name or an allocated Track Number) and this information is automatically shared among controllers of the same coalition.

Please note that the **persistent or temporary characteristic** of the Radar Track Numbers depends on the [[detection profile]] setting (set by the server).

This TN system, the values it uses, and the persistent / temporary characteristic of the allocated TNs is still WIP in the 0.9.0 version of LotAtc. Please refer to the [[detection profiles]] page for more details.

Note about the Vertical Indicator

You can use customize the vertical indicator:

Characters used

Different arrow character can be used try: *%(vert_indic|n)* with n between 0 (default) to 2

Do not display stable value

If you do not want to display stable indicator (only up and down) use *%(vert_indic|nostable)*

You can mix the differents options: *%(vert_indic|1|nostable)*

Files

lotatc_labels.jpg	15.8 KB	05/12/2013	Azrayen
lotatc_labels_0.9.0.jpg	23.7 KB	11/17/2013	DArt

Languages

Thanks to volunteer members of the community, several languages are now available for LotAtc 4 DCS client. Thanks to all involved!

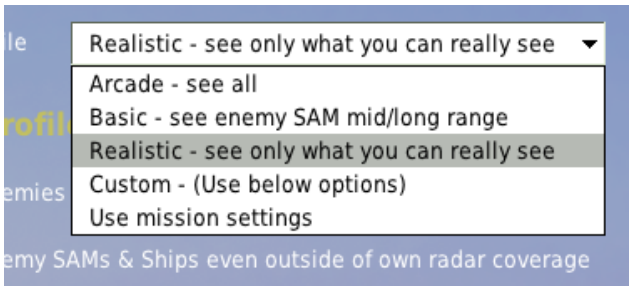
Table of the languages available (or soon to be available) in LotAtc 4 DCS client			
Language	**Language (EN)**	**Translator(s)**	**Status**
English	English	DArt	Fully Implemented
Français	French	DArt	Fully Implemented
Deutsch	German	Supersheep	Fully Implemented
Italiano	Italian	AMVI_Flanker	Fully Implemented
Polski	Polish	ptako	Fully Implemented
Ceština	Czech	Suchacz	Partially Implemented
Português	Portuguese	hguimaraes	Fully Implemented
Srpski	Serbian	ArcticSilence/Sova	Fully Implemented
Español	Spanish	Francis	In progress for 1.0.0
-	Chinese	uboats	In progress for 1.0.0
-	Russian	Edrussia	In progress for 1.0.0
Svenska	Swedish	Dejjvid	In progress for 1.0.0

Detection Profiles

LotAtc features five "Detection Profiles". The server chooses a profile, that is then enforced for all its LotAtc clients (from both coalitions).

The profile sets what clients ATCs will see or not see on their radar displays, and what functionnalities will be available to them.

> *Actually, LotAtc server knows everything that goes onto the mission. So technically, profiles are sets of 'filters', from the less to the more restrictive, applied to data send to (hence displayed by) LotAtc clients.*


Realistic - see only what you can really see
Arcade - see all
Basic - see enemy SAM mid/long range
Realistic - see only what you can really see
Custom - (Use below options)
Use mission settings
emy SAMs & Ships even outside of own radar coverage

Definitions

Detection area

Units equipped with a surveillance radar in DCS have a pre-determined **detection area**. This area sets "where" the unit can "see" others using its radar. To implement detection areas (range & characteristics), LotAtc 4 DCS uses the needed values directly from DCS own database.

> *This allows LotAtc 4 DCS to manage fluently new units added to DCS World, and keeps the DCS+LotAtc system logical.*

Depending on which Detection Profile is set, detection areas may however vary. Please see the description of each Profile below for more details.
The relevant units are:

- AEWs aircraft (also known as AWACS) such as the E-3 *Sentry*, the E-2 *Hawkeye* and the A-50 *Mainstay*.
- EWRs on the ground.
- Medium and Long Range SAMs units.
- Radar-equipped warships such as CVs, CVNs, CGs, CGNs, DDs, FFs, FFLs, FFG, FSGs... etc.

Those units should be "alive" to have a valid detection area. In other words, if a unit is killed during a mission, then the informations its radar provided to LotAtc is lost.

Short range radars, with a detection range of 5,000m or less (based on DCS data) are not taken into account: We consider that only bigger radars are likely to be used by controllers who provide guidance to aircraft.

Radar Coverage

In some of the profiles described below, the notion of **radar coverage** is used.
Your radar coverage is the sum of the detection areas of each of your coalition radars assets (provided their detection range is > 5,000m, based on DCS data). Indeed, LotAtc 4 DCS condiders that those radar assets work as part of a datalinked network, and that as a controller you'll be able to see the whole picture.

> *LotAtc cannot know - at this time - the status (operating/not operating) of the radars. Hence those radars are always considered as active in LotAtc, and always contribute to their coalition radar coverage, except for AWACS that are considered "active" only when above 50 kts (~ 93 km/h) ground speed; this prevents the AWACS to "see" anything when taxying, which would be unrealistic (not to mention the dangerousness for the unlucky engineers around ^^). We're aware all this is not so cool, and we'll try to remove this current **limitation** as soon as possible.*

LotAtc client displays the radar coverage *via* the detection circles of each of your radar assets. The sum of all circled areas (on your side) is your approximate horizontal radar coverage.

> *Aircraft's RCS is not taken into account for now. The notion of being inside or outside the radar coverage is a On/Off choice at this time.*

The ARCADE profile

The **Arcade** profile meets two philosophies :

- Being kind of a "god's eye" (or "cheat") mode which sees the whole tactical situation, whithout limitation.
- Being super-easy to use i.e. not all functionnalities or options are there.

This profile is intended for beginners or those who don't care so much about "realism". It may also be used to stream a full tactical situation to spectators,

for people organizing ~live events.

Units displayed in Arcade profile

LotAtc diplays all aircraft, ships and ground units (blue & red, airborne & on the ground, even the simple private) on their radar displays, regardless of your coalition or its actual detection capabilities (aka radar coverage).

The only "units" you won't see on your LotAtc display in Arcade profile are the weapons (missiles of all types, bombs, gun rounds...) that can "fly" but are definitely *not* considered as aircraft.

Symbology & identification of units in Arcade profile

Aircraft symbology is quite simple: one symbol and color for allied aircraft, another symbol and color for ennemy aircraft. That's all.

Identification of the pilot's name is provided for all aircraft from both coalitions.

Identification of the unit's type is provided for all units (aircraft, ground units, boats) from both coalitions.

All those data are automatically provided by LotAtc, from DCS mission data, and cannot be changed within LotAtc in Arcade profile.

The BASIC profile

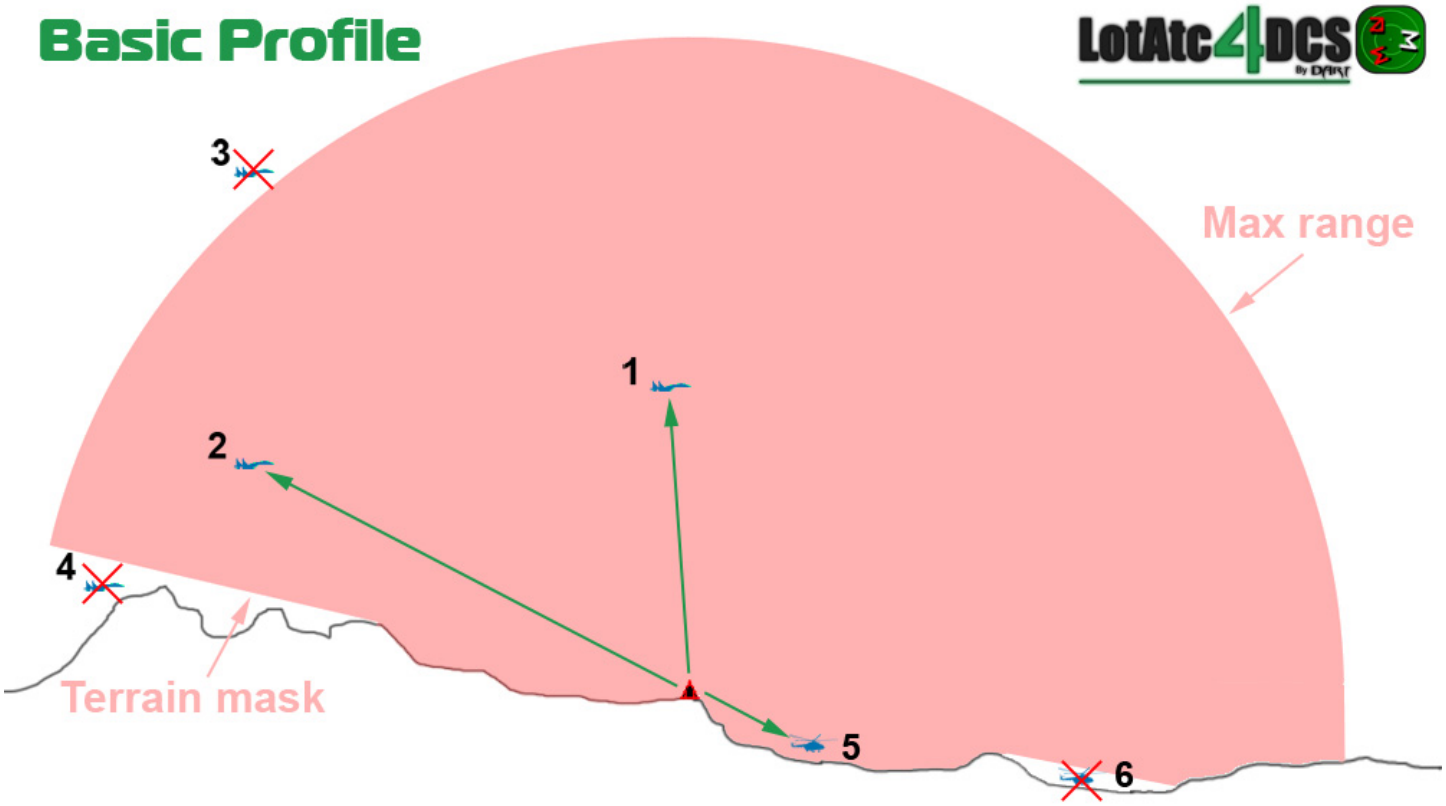
The **Basic** profile philosophy is to provide a narrower view of the tactical situation than does the "magical" arcade profile, and at the same time to help controllers with as much automation as possible. It's intended to be nice to play with, but not too hard to manage for people who want a casual experience about controlling missions.

It introduces a simplified version of the detection area for each surveillance radar equipped unit. We call this simplified version the **"Spherical Radar"**.
It's based on range only: each radar unit detection area is a sphere, the center of which is the radar location. The sphere is drawn from the max range value for this radar, as set by the DCS database.
The Spherical Radar limits LotAtc visibility for aircraft only: Ground and Sea targets may be displayed (if they match criteria) wherever they're on the map in Basic Profile. This "simulate" a full map ESM capability.

The Basic profile also come with three important filters. The first two restrict the ability of your radars to see aircraft, while the third one affects your visibility of ground and sea units:

Units affected	Filter based on	Description
Aircraft	Speed	This prevents aircraft flying to slow to be displayed by LotAtc. This allows to declutter controllers display by not showing aircraft on the ground.
Aircraft	Terrain	This prevents aircraft that hide in the relief (terrain masking) to be displayed by LotAtc.
Ground/Sea units	Unit's radar capability	LotAtc simulates an "ESM" capability, meaning that such units which will be detected only if they emits a (powerful enough) radar signal.

The following diagram summarizes the visibility obtained with the Basic profile:



- Airplanes 1 & 2 and helicopter 5 are displayed by LotAtc.
- Airplane 3 is not displayed, even if it flies at the same "horizontal" distance (from the radar) as airplane 2, because being higher it is outside the max range bubble.
- Airplane 4 and helicopter 6 are not displayed, because they're masked by the terrain.

Units displayed in Basic profile

LotAtc displays:

- all aircraft that:
  - have a ground speed > 50 kt for airplanes, and > 25 kt for helicopters. The lower speed for helicopters was introduced to take into account the doppler effect of a rotor as seen by a radar, that helps said radar to detect and classify a chopper even at lower speeds.
  - are "seen" by any of your radar assets (taking into account the spherical range of each radar) and the terrain masks in mountainous areas.
- all ground & sea units (anywhere on the map) that:
  - possess a radar which detection max range is strictly greater than 5,000m (based on DCS data).

What does this mean? Well, that means that you won't see a taxying aircraft, nor a hovering helicopter; you won't see cargo ships, APCs or MBTs either (they have no radar), nor a Shilka for example (it has not enough detection range in DCS, report to DCS encyclopaedia if needed).

Symbology & identification of units in Basic profile

The Basic Profile allows the controllers to use the full extent of the existing symbols in LotAtc 4 DCS. Each controller has the ability to change any aircraft symbol. The assigned symbol is shared among all controllers of the same coalition.

The Basic Profile also aims to help the controllers by automatically assigning certain symbols to certain aircraft (at first detection). Doing this, the software kind of simulates tasks that are mostly done by radar operators IRL. This part is still WIP in 0.9.0, the table below shows where we are for now on this topic (last column), be aware this will be enhanced in the future.

Table of the 9 symbols available for aircraft in LotAtc 4 DCS 0.9.x Basic Profile			
Relevant coalition:	**Symbol name:**	**Symbol to use for:**	**Automatically assigned in 0.9.0 for:**
Allies or Ennemies	Unknown	New contacts for which the controller has not specific information	All aircraft except for AEWs (both sides) and allied Helicopters
Allies	General - Civilian	Civilian (non-threatening) flights, military freighter under civilian flight rules...	none (WIP)
Allies	Helicopter	Allied Helicopters	Allied helicopters
Allies	Strike - Support	Allied Bombers (AI, CAS...),	*none (WIP)*

		Tankers, ASW aircraft...	
Allies	Fighter	Allied Fighters in CAP/Air Defense mission	none (WIP)
Allies	AEW - HVA	Allied High Value Assets such as AEWs, VIP transport... protect them well!	Allied AEWs
Ennemies	Zombie	Suspect or Rogue Civilian aircraft	none - @ controller's discretion
Ennemies	Bandit	Ennemy military aircraft	Ennemy AEWs
Ennemies	Hostile	Ennemy aircraft to be shot down	none (WIP)

> *Note about the "Helicopter" symbol: IRL, it's used fort allied choppers only. A specific symbol for helicopters does not exist in the "French" set of symbols; hence if you choose "Helicopter" with the "French" set, you'll visually get the same symbol as General - Civilian. This is not a bug, this is a feature /plugin_assets/redmine_wiki_extensions/images/wink.png*

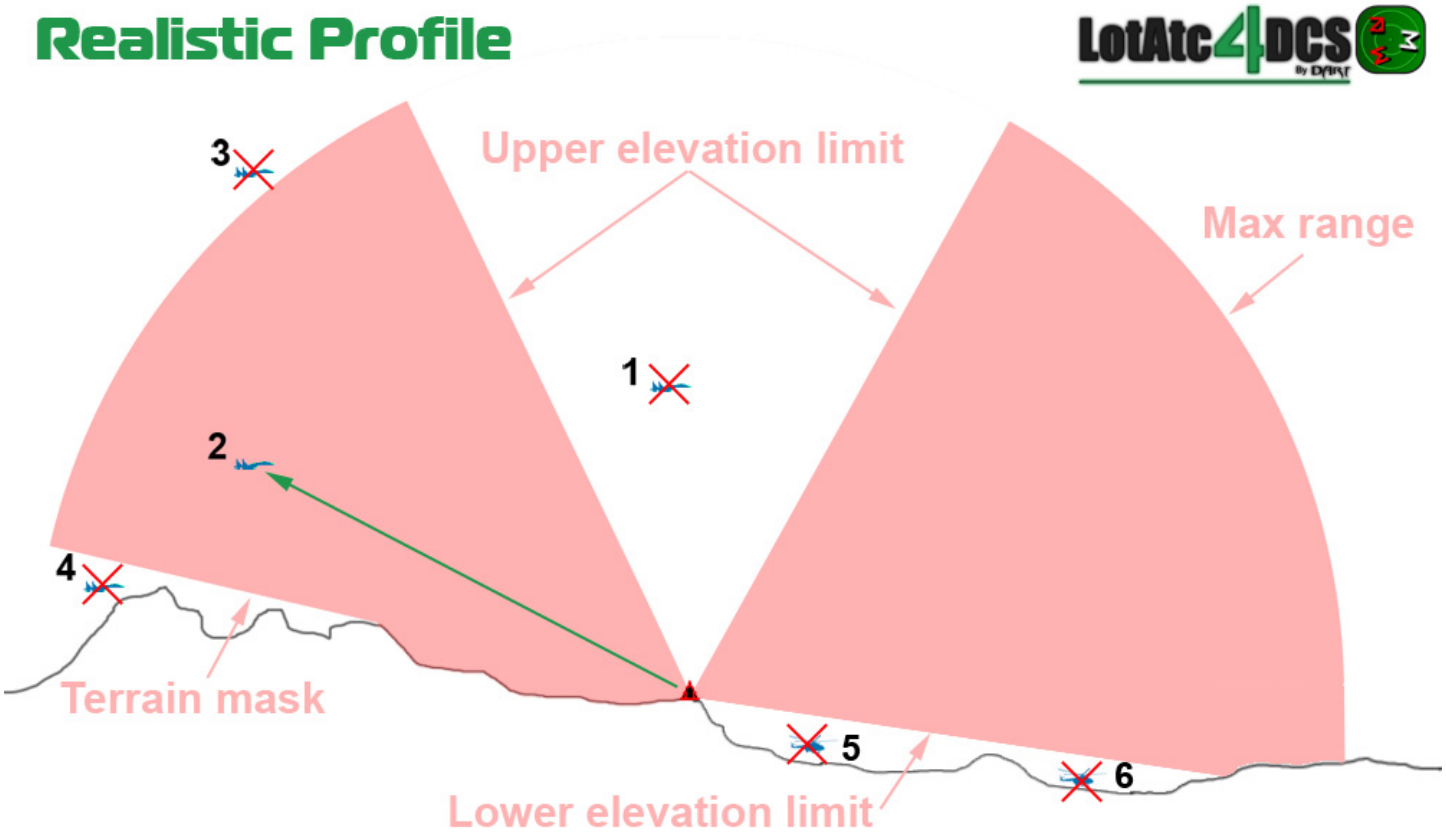
> *Note about the "Zombie" symbol: Its use could be extended to (all) civilian aircraft from the ennemy coalition: in DCS, there is no real "neutral" or civilian side.*

The REALISTIC profile

The **Realistic** profile represents our best effort to make it feel real. You can't "see" aircraft outside your radar coverage.
The same rule applies for ground and sea targets: we decided to simulate the ESM coverage as equivalent to the radar coverage.

What's more is that your radar coverage uses what we call the **"Full Radar"** modelisation, meaning that radar limitations in azimuth and elevation are taken into account. That means for example that an AWACS can't see just above nor just under itself.
As for other values, azimuth and elevation limits applied by LotAtc are directly read from the DCS database.

The following diagram summarizes the visibility obtained against air targets with the Realistic profile:



- Airplane 1 is not displayed, because it is above the upper elevation limit of the radar scan zone (aka "blind cone").
- Airplane 2 is displayed by LotAtc.
- Airplane 3 is not displayed, even if it flies at the same "horizontal" distance (from the radar) as airplane 2, because being higher it is outside the max range bubble.
- Airplane 4 is not displayed, because it is masked by the terrain.
- Helicopters 5 and 6 are not displayed, because they're under the lower elevation limit of the radar scan zone.

Units displayed in Realistic profile

LotAtc displays:

- all aircraft that:
  - have a ground speed > 50 kt for airplanes, and > 25 kt for helicopters. The lower speed for helicopters was introduced to take into account the doppler effect of a rotor as seen by a radar, that helps said radar to detect and classify a chopper even at lower speeds.
    This declutters the displays at airbases, for aircraft on the ground. This also makes **hovering helicopters** disappear.
  - are "seen" by any of your radar assets (taking into account the Full Radar modelisation) and the terrain masks in mountainous areas.
- all ground & sea units that:
  - possess a radar which detection max range is strictly greater than 5,000m (based on DCS data). Reminder: we simulate an ESM capability, not an Air-to-Ground radar. That explains why we did this.
  - are "seen" by any of your radar assets (taking into account the Full Radar modelisation) and the terrain masks in mountainous areas.

Symbology & identification of units in Realistic profile

Table of the 9 symbols available for aircraft in LotAtc 4 DCS 0.9.x Realistic Profile			
Relevant coalition:	**Symbol name:**	**Symbol to use for:**	Remarks:
Allies or Ennemies	Unknown	New contacts for which the controller has not specific information	LotAtc uses this one for each new contact except Allied AEWs
Allies	General - Civilian	Civilian flights, military freighter under civilian flight rules...	
Allies	Helicopter	Allied Helicopters	No specific symbol exists for helos in "French" set: General - Civilian symbol is displayed instead
Allies	Strike - Support	Allied Bombers (AI, CAS...), Tankers, ASW aircraft...	
Allies	Fighter	Allied Fighters in CAP/Air Defense mission	Do not use this for fighter/bombers in ground attack missions
Allies	AEW - HVA	Allied High Value Assets such as AEWs, VIP transport...	Your AEWs will get this symbol automatically; that's the only automatisation in Realistic profile
Ennemies	Zombie	Suspect or Rogue Civilian aircraft	As there is no real "civilian" side in DCS, this may be use to all ennemy transports
Ennemies	Bandit	Ennemy military aircraft	Including ennemy AEWs
Ennemies	Hostile	Ennemy aircraft to be shot down	Example: aircraft whose behavior leads you to classify them as fighters threatening

The CUSTOM profile

By chosing this profile, you can adjust LotAtc options to customize how you want to use LotAtc

Here the differents options:

Custom profile options
Display enemies parameters (name, type,...)
Display enemy SAMs & Ships even outside of own radar coverage
Use low speed filter (aircraft too slow are filtered)
Use relief (terrain masking) filter
Automatic type for new item
For all
Radar modelisation
See all (no radar management)
Approach mode on airport
Own coalition airports only

Options	Description
Display enemies parameters	show/hide enemies parameters like its name, the type (ex: Su27), its callsign
Display enemy SAM & Ships even outside of own radar coverage	If true, client will see SAM and ships of the other coalition even if

	they are outside its radar coverage
Use low speed filter	if true, planes and helicopter with low speed will be filtered
Use relief	If true, LotAtc will use the relief to decide if a contact is seen, if false, LotAtc will live in a plate world, without mountains
Automatic type	For a new contact, system will apply the correct symbole depending of its type (AWACS, fighter...) otherwise it will be unknow type
	- For all (enemies and friendly)
	- Only for friends (friendly only)
	- Disable (for nobody)
Radar modelisation	LotAtc can use different radar modelisation (simple and fast to more complex)
	- See all (radar coverage are infinite, you see everything)
	- Cylinder (radar are cylinder with infinite altitude)
	- Spherical (radar are perfectly spherical)
	- Conical (radar are spherical but has blind cone generally on top and bottom, values come from DCS World)
Approach mode on airport	Choose who can control and which airport can be controlled
	- None (no control on any airport)
	- Own coalition airports only (can control only airports in its coalition)
	- All airports (can control all airports)

The MISSION profile

When saving a mission file in mission editor, DCS save current LotAtc options in the miz file (all options are concerned, enable, profile, options...). By settings this profile in the DCS server, LotAtc will used the LotAtc options found in the miz.

Files

Basic_Profile.jpg	59.8 KB	11/17/2013	DArt
Realistic_Profile.jpg	78.6 KB	11/17/2013	DArt
picture996-1.png	27.9 KB	02/10/2015	DArt
picture996-2.png	121 KB	02/10/2015	DArt

Download

For **DCS 1.2.16** : Current version is: **1.0.0-rc2** (see archives below)
warning. For **DCS 1.5** : Current version is: **1.0.0-rc3**
warning. For **DCS 2.0** : I work on it, I will publish a compatible version ASAP
CLIENT DOES NOT WORK ON WIN XP

Server

{FREE} Server is free to use!
ONLY FOR DCS 1.5.X (For DCS 1.2.16 see 1.0.0-rc2 in archives below, for DCS 2.0, I work on it, I will publish a compatible version ASAP)
For DCS World 64 bits:

- Server LotAtc4DCS 1.0.0-rc3 - 64 bits [EXE]
- Server LotAtc4DCS 1.0.0-rc3 - 64 bits [JSGME]
  - You will need to install this file for JSGME Mod version: relief.db and put it in your {Users}\LotAtc 4 DCS Data\ directory. (ex: C:\Users\DArt\LotAtc 4 DCS Data\relief.db)

See [[Server Installation guide]] for help

Client

Client needs a license, if you do not have one: [[Get Client]]
{FREE} Without it, you can run it as demo version, limitations are:
- 10 minutes until disconnection
- Only one connection by LotAtc DCS session (to be able to reconnect, you must relaunch a mission on the DCS host)

Links:
- LotAtc4DCS 1.0.0-rc3 - 32 bits
- LotAtc4DCS 1.0.0-rc3 - 64 bits

See [[Client Installation guide]] for help

Known problems

- COMPATIBLE with OpenBeta 1.5.1, as OB is not yet stable, next version is not garantee to work
- CHAT (and BRAA sent to pilots) does not work yet, it will come soon
- All airports are neutral, known bug, will be fixed soon too

Archives

Previous versions :

- 1.0.0-rc2 **LAST VERSION FOR DCS < 1.5 !!!!**
  - Server :
    - Setup_LotAtc_4_DCS_Server_1.0.0-rc2_64bits.exe
    - JSGME Mod_1.0.0-rc2
  - Client:
    - Setup_LotAtc_4_DCS_1.0.0-rc2_32bits.exe
    - Setup_LotAtc_4_DCS_1.0.0-rc2_64bits.exe

- 0.9.2
  - Server :
    - Setup_LotAtc_4_DCS_Server_0.9.2_64bits.exe
    - JSGME Mod_0.9.2
  - Client:
    - Setup_LotAtc_4_DCS_0.9.2_32bits.exe
    - Setup_LotAtc_4_DCS_0.9.2_64bits.exe

- 0.9.1-3
  - Server :
    - Setup_LotAtc_4_DCS_Server_0.9.1-3_64bits.exe
    - JSGME Mod_0.9.1-3
  - Client:
    - Setup_LotAtc_4_DCS_0.9.1-3_32bits.exe
    - Setup_LotAtc_4_DCS_0.9.1-1364bits.exe

- 0.9.1-1
  - Server :
    - Setup_LotAtc_4_DCS_Server_0.9.1_64bits.exe
    - JSGME Mod_0.9.1
  - Client:
    - Setup_LotAtc_4_DCS_0.9.1-1_32bits.exe

    - Setup_LotAtc_4_DCS_0.9.1-1_64bits.exe

- 0.9.0
    - Server : Setup_LotAtc_4_DCS_Server_0.9.0_64bits.exe
    - Client:
        - Setup_LotAtc_4_DCS_0.9.0_32bits.exe
        - Setup_LotAtc_4_DCS_0.9.0_64bits.exe

- 0.8.2
    - Server: Setup_LotAtc_4_DCS_Server_0.8.2_64bits.exe
    - Client
        - Setup_LotAtc_4_DCS_0.8.2_32bits.exe
        - Setup_LotAtc_4_DCS_0.8.2_64bits.exe

- 0.8.1
    - Server: Setup_LotAtc_4_DCS_Server_0.8.1_64bits.exe
    - Client
        - Setup_LotAtc_4_DCS_0.8.1_32bits.exe
        - Setup_LotAtc_4_DCS_0.8.1_64bits.exe

- 0.8.0
    - Server: Setup_LotAtc_4_DCS_Server_0.8.0_64bits.exe
    - Client
        - Setup_LotAtc_4_DCS_0.8.0_32bits.exe
        - Setup_LotAtc_4_DCS_0.8.0_64bits.exe

Download OpenBeta

{BETA}

ONLY COMPATIBLE WITH DCS > 1.2.8-RC2

Current version is: 0.9.1-3
Be careful, the 0.9.1-3 client needs a >=0.9.1 server (not compatible with previous version)

CLIENT DOES NOT WORK ON WIN XP

Server

Server is free to use!

- For DCS World 64 bits:
  - Setup_LotAtc_4_DCS_Server_0.9.1-3_64bits.exe
  - JSGME Mod
    - You will need to install this file for JSGME Mod version: relief.db and put it in you {Users}\LotAtc 4 DCS Data\ directory. (ex: C:\Users\DArt\LotAtc 4 DCS Data\relief.db)

See [[Server Installation guide]] for help

Client

Client needs a license, if you do not have one: [[Get Client]]
Without it, you can run it as demo version, limitations are:

- 10 minutes until disconnection
- Only one connection by LotAtc DCS session (to be able to reconnect, you must relaunch a mission on the DCS host)

Links:

- Setup_LotAtc_4_DCS_0.9.1-3_32bits.exe
- Setup_LotAtc_4_DCS_0.9.1-3_64bits.exe

See [[Client Installation guide]] for help

Features

This page describes the features of the current version of LotAtc 4 DCS, and a roadmap of what is coming next. Note that the roadmap could change...

Current version: 1.0.0

Features of current version

Server:

- Integration "into" DCS World, as a free module
- Low hardware ressources needs = low/none FPS impact for the DCS host
- Manages several [[Detection Profiles|detection profiles]]
- Manages authentification of controllers (LotAtc clients)
- Filters implemented (used or not depending on [[Detection Profiles]] configuration):
  - Speed (removes aircraft units under minimal speed)
  - Radar (removes all units not in the coalition radar coverage). The radar coverage is the sum of individual radars areas (aka detection range).
  - **Relief**. This allow LotAtc to manage terrain masking. [new in 0.9.0]
- The Radar filter is spherical (range in 3D) and follows DCS specifications. [new in 0.9.0]
- Reduced latency networking between server/client [new in 0.8.1]
- Built-in support of mission (re)loading without the need to restart DCS server [new in 0.8.1]

Client:

- Installation as a stand alone application (no need for DCS). Client needs a licence, buy it here: [[Get Client]]
- Client may be tested before purchase with the **demo mode** (10' of play). [new in 0.9.0]
- Application is localization-ready. English and French languages included since 0.8.0, and 6 new [[Languages]] added in 0.9.0.
- Includes several maps. A map showing the relief is added in 0.9.0
- Includes airports runways
- Manage coalitions (IFF): self is white, enemy is red
- Ability to change colors of coalitions [new in 0.9.0]
- Automatic assignation of a unique track number ("TN#") for enemy aircraft, allowing controllers to identify them when communicating
- Ability to change the default name (or TN#) of aircraft; changes are automatically shared among controllers of your coalition [new in 0.9.0]
- Controllers can set the symbol used for displaying aircraft (to precise their classification, e.g. friendly liner/ transport, friendly fighter, unknown, hostile... etc.). Symbols are shared among clients (controllers) of the same coalition. This feature is available depending on the Detection Profile (i.e. not in ARCADE). [new in 0.9.0]
- Two different sets of symbols available. [new in 0.9.0]
- Displays customisable [[Labels|labels]] for aircraft
- Able to display sea & ground units that meet the detection criteria (criteria depending on the detection profile). [new in 0.9.0: has_a_radar criteria now taken into account]
- Able to display detection/threat ranges (circles) (+option: mask them) for sea & ground units, and AWACS
- Clients are able to display DCS mission data: time, weather (if static), Bullseye... [new in 0.9.0]
- Clients are able to display the [[Detection Profiles|detection profile]] enforced by the server. [new in 0.9.0]
- Fix for network code: no more freezes or lack of picture [new in 0.8.2]
- Chat will be implemented; this feature will allow controllers to text-chat between themselves, for a better coordination in complex scenarii [new in 0.9.1]
- Controllers will be able to manage their own Altitude & Speed filters (those will act in addition to the server-enforced filters).[new in 0.9.1]
- Client will be able to create persistent & hookable BRAAs; this means those BRAAs (Bearing Range Altitude Aspect measurement) will stay displayed until manually removed, and will "follow" the objets onto which they're hooked.[new in 0.9.1]
- Drawings: Controllers are able to create, modify and share drawings (lines, shapes, points, texts...) onto their displays; this will allow them to share information with better accuracy (e.g. a point of interest), or to manage combat zones with different RoE...
- Client are able to display the last known positions of an aircraft, as a "trail"; this help controllers to visualize aircraft trajectories.
- Airport mode with ILS approachs and complete taxiways, allowing controllers to fulfill the APP/DEP, TWR and GND roles.

Get Client

Payment

LotAtc client license costs:

- (1-4 licenses) **20 Euros** each (*ca* $25 depending of current exchange rate).
- {NEW} (5-9 licenses) **15 Euros** each (-> please contact me before)
- {NEW} (+10 licenses) **10 Euros** each (-> please contact me before)

The licence includes:

- the right to use the current version of LotAtc 4 DCS client on one unique computer,
- all next bugfixes releases and the next [[features]] listed (you'll be able to upgrade with your current licence, no additional costs),
- and certainly other features not yet listed.

Your purchase will help me to spend time to enhance LotAtc and add new [[features]]!

Payment can be made with Paypal, using the following link.

The license is for **one computer** and is only valid if **you're an individual or a non-profit organization**.
If your are not in this case, please contact me directly

{{lotatc_paypal}}

As it is a manual operation for me to send the license key, it could take up to 24h. I am living in UTC+1 zone. If 24h have passed, check this forum if there is not a post describing a temporary problem with the operation. If not, then please contact me directly

- Check your spam folder, the email with the license key is sometimes put directly in the spam folder.
- If you register with **an hotmail email**, the server trash sometimes the email without notification for you or email error on my side... If you have not received the email within the 24 hours, just send me a email, I will use another method to deliver it to you.

Problems/questions with payment? See the [[Payment FAQ]].

Download

Go the [[download]] page.

Why is payment in Euro?

As a I am French, I prefer to use my currency as a reference. However, with Paypal, it will automatically convert the price in your currency using current exchange rate. That means that in other currency like US Dollars, LotAtc price may vary with exchange rate.

I have paid with Paypal, but I have not received my license key ?

As it is a manual operation for me to send the license key, it could take up to 24h. I am living in UTC+1 zone.

If 24h have passed, check this forum if there is not a post describing a temporary problem with the operation. If not, then please contact me directly

I would not use Paypal but I want to buy a license

Paypal is a very secure way to make a transaction, for you and for me.

Anyway, if you do not want to use it, please contact me directly so we can work out an arrangement.

Server Configuration

1.0.0 only

Configuration file

You can configure LotAtc Server within the **config.lua** file. It is located in your {UserHome}/Saved Games/DCS/mods/tech/lotatc/config.lua
Use Notepad++ or Sublime Text to modify this file, DO NOT USE Notepad, it will corrupt the file

```
lotatc_inst.options =  {
---------- Options that cannot be added yet in DCS Options
-- Enable LotAtc
-- (default=true)
use_atc            = true,
-- LotAtc server port
-- (default=10310)
port               = 10310,

-- Passwords
red_password       = "red" ,
blue_password      = "blue",

-- Limitations
-- -1 means no limit
red_max_clients    = -1,
blue_max_clients   = -1,

-- All units with this name (or human pilot group) will be AWACS
-- void text disables the feature
-- (default="")
virtual_awacs_name    = "",
-- Radius detection range in kilometer for virtual AWACS ( must be > 5km )
-- (default=400)
virtual_awacs_range = 400,

---------- Optimisation flags, be careful with them
-- Number of seconds between DCS data extraction
-- (default=2, lower can reduce peformances)
update_time        = 2,

-- Check for new units (AI group spawning during mission)
-- Set false if you do not spawn unit in lua in your missions
-- (do not impact humain pilot ONLY AI )
-- (default=true)
check_new_ai_unit = true,

-- If enabled, search for new unit only on n seconds:
-- (default=10)
update_search_for_new = 10,

-- Maximum number of units updated in each block of data
-- (default=100)
max_loop_unit = 100,

---------- Next flags are for debug/test only (SHOULD BE FALSE)
-- Enable verbose output in dcs.log, useful to report problems
-- but big performances impact
-- (default=false)
enable_debug    = false,

--Enable performances output, useful to report problems
-- (default=false)
perfs_test        = false,
}
```

Basic configuration

enable_atc

You can choose to activate or desactivate LotAtc using:

```
use_atc = true,
```

- **true**: LotAtc will run if LotAtc is enabled in DCS options, otherwise it will not run
- **false**: nothing will be done, LotAtc will be desactivated.

port

```
port = 10310,
```

Set the port used by LotAtc
This port must be different than DCS one or any other application.If you host a LotAtc session, you must set your firewall to enable this port

Passwords

```
red_password       = "red" ,
blue_password      = "blue",
```

Set the passwords used by LotAtc client to connect to the server.

Limitations

```
-- Limitations
-- -1 means no limit
red_max_clients       = -1,
blue_max_clients    = -1,
```

Limit the number of LotAtc client per coalition. Set -1 for unlimited, 0 desactivate the coalition (no controller slot will be available).

Virtual Awacs

Virtual Awacs can be used to use any unit or group as a AWACS for LotAtc. The unit become a radar and used to compute the picture for LotAtc users.

```
virtual_awacs_name     = "",
```

- If void: no virtual awacs will be used
- If no void: all AI unit with this name and all human **group name** that contains the value will be used

For example, if you set it to "myawacs", the AI unit called "myawacsFromBatumi" will become a AWACS.

```
virtual_awacs_range = 400,
```

Specify the radius in kilometer of the Virtual awacs detection circle

Advanced

This part is for advanced users only, it could degrade performances and cause trouble. If you are unsure, let values by default

update_time

This value defined the time desired between two DCS data extraction for each unit. By default, it is fixed to 2second.

```
update_time = 2,
```

This value is a consign, for large mission with thousands of units, LotAtc can increase automatically this value to avoid lag on server.

Search for new AI routine

As new group can be spawned by lua script in the mission, LotAtc search regularly for new unit in DCS realtime database. This action take some time. If you are sure that your mission does not spawn unit, you can disable this. You can also changing the time between 2 checks.

```
check_new_ai_unit = true,
```

- **true** : LotAtc will search for new units
- **false** : LotAtc will no search for new units, if new unit are spawned, LotAtc will not see them

Human respawn is not affected by this, even with check at false, human respawn will be managed by LotAtc

```
update_search_for_new = 10,
```

Time between 2 check in seconds. By default, it is set to 10s.

max_loop_unit

To optimise performances, LotAtc split all units in group of *max_loop_unit* units and update them group by group. For a mission of 500 units, 5 groups will be created and be updated each *update_time* / 5 seconds.

```
max_loop_unit = 100,
```

- Increase the value reduces LotAtc access in server but increases LotAtc compute time
- Decrease the value reduces LotAtc compute time but increases LotAtc access

Debug

Set true to the following flags will reduce LotAtc server performances and can add lag for DCS client. Use them only for bug reporting or server optimisation.

enable_debug

```
enable_debug    = false,
```

- **true**: LotAtc will be verbose in DCS.log, usefull for bug reports
- **false**: Only minimal output will be done in DCS.log

perfs_test

```
perfs_test    = false,
```

- **true** : will output performances timing in LotAtc_server.log file. Useful for tweaking optimisation parameters like *max_loop_units*
- **false**: no performances output

Server Installation guide

Get it

The server is free and only available for DCS World 64bits (this is because ED has stopped supporting the 32bits version of DCS World).
You can get LotAtc 4 DCS server from here: [[Download]].
NOTICE:
- ServMan3 compatibility
- SIMod compatibility

Installation

Installing as a DCS module

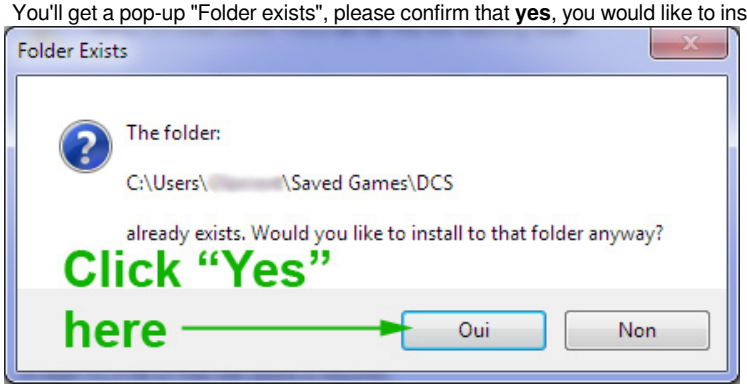
LotAtc server is a module for DCS World. It needs to be installed "within" DCS World. **This is mandatory for the LotAtc server to be able to run**.
LotAtc server may be installed:
- in the Saved Games directory, along with your DCS personnal files/settings if you use the .exe installer
  or
- in the simulator installation directory if you use JSGME.

> *The instructions below apply for the .exe installation only. JSGME installation will be described later (documentation = WIP)*

The installation is automatic, simply run the installer (Setup_LotAtc_4_DCS_Server_xxxxx_64bits.exe with xxxxx being the version number) and check that it finds & targets the correct installation folder:

> *Default folder (Vista/7/8) is C:\Users\%USERNAME%\Saved Games\DCS*

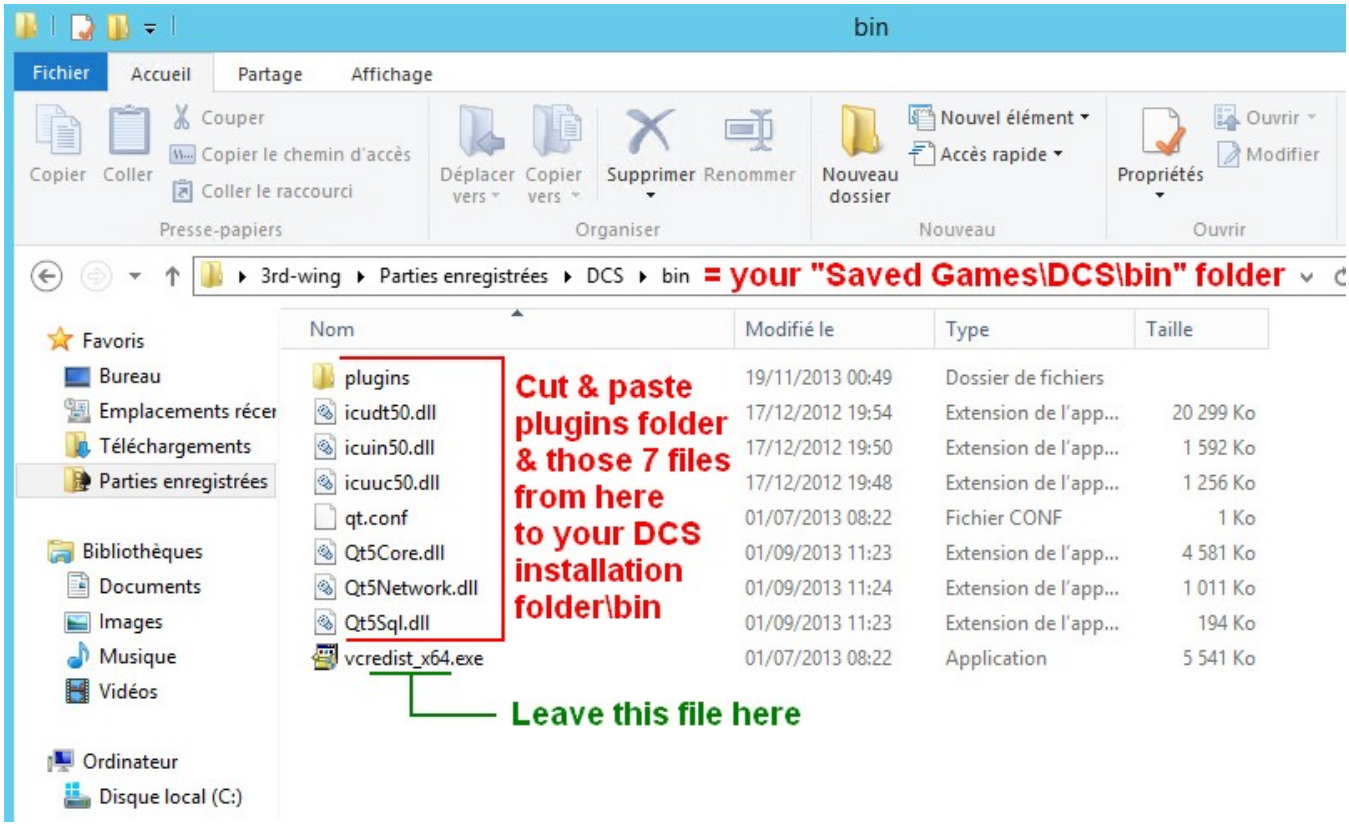
You'll get a pop-up "Folder exists", please confirm that **yes**, you would like to install to that folder anyway:



The installer will also put one sub-folder and 7 files into your DCS World\bin folder.
It will locate this folder through your Windows'registry *via* the value of the "Path" key in HKEY_CURRENT_USER\Software\Eagle Dynamics\DCS World.
The folder and files are then automatically copied into the correct folder, and you should not care about them.
The relevant elements are:
- one sub-folder named 'plugins'
- 6 DLLs files: icudt50.dll, icuin50.dll, icuuc50.dll, Qt5Core.dll, Qt5Network.dll and Qt5Sql.dll
- the qt.conf file

If, for whatever reason, the installer is unable to read the registry key, or unable to write the files into the target folder \DCS World\bin, it will put them into \Saved Games\DCS\bin, for you to move them manually.

So **if**, after installing LotAtc 4 DCS server, you have anything else than the vcredist_x64.exe into your \Saved Games\DCS\bin (as shown on the image below) **then** you have to move those elements (the 'plugins' folder + 6 DLLs + qt.conf, not the vcredist_x64.exe) into the "bin" folder of your DCS World installation:



> *If those files ('plugins' folder + 6 DLLs + qt.conf) are not present into the intended DCS World\bin folder, DCS multiplayer will act weird (no login/pass for master server, no connexion speed choice... glitches... crashes... and so on).*
> *Keep smiling: Putting those files ('plugins' folder + 6 DLLs + qt.conf) into the intended folder solves everything, without any sequelae!*

Granting Network access

Being a server application, LotAtc 4 DCS server must be able to "listen" for incoming clients on its communication port. The protocol used is TCP and the default port is 10310.

> *If needed, you may change the port number, but not the protocol. Don't forget to inform your clients who will need this information to connect to your server.*

Regarding your **firewall** configuration: as a module, LotAtc 4 DCS server acts as a part of DCS World. Hence you have to allow DCS World (dcs.exe) to communicate through the TCP 10310 port (or your personnalised port number).

If you have a **router** (or an internet box with a router feature), you **must configure** it to relay the incoming TCP 10310 communications to your PC identified by its Local Area Network IP. This is called Port Forwarding (or sometimes NAT). Refer to your router/box user manual for how to do that.

> *By the way, you already did that for your DCS server: it's the same operation, just a different port number (DCS World uses TCP 10308 & UDP 10308, whereas LotAtc 4 DCS uses TCP 10310).*

What's next?

After installation succeeds, the LotAtc 4 DCS server icon will be displayed on your DCS splash screen, along with other DCS modules:

Once you get this, please follow the [[Server user manual]] instructions to enable & run LotAtc server within DCS World.

Please also follow instructions in the SLmod compatibility entry in the [[Server FAQ]] if you want to use both LotAtc 4 DCS server and SLmod together.

Uninstallation

Run the uninstaller via the start menu shortcut.

If you don't have a start menu shortcut, use windows add/delete programs feature, or execute the uninstaller directly from your C:\Users\%USERNAME%\Saved Games\DCS folder.

Problems/questions

See [[Server FAQ]]

Files

folder_exists.jpg	34.1 KB	05/13/2013	Azrayen
module.jpg	48.1 KB	05/13/2013	Azrayen
install_server_files_to_move.jpg	111 KB	11/19/2013	Azrayen

Server User Manual

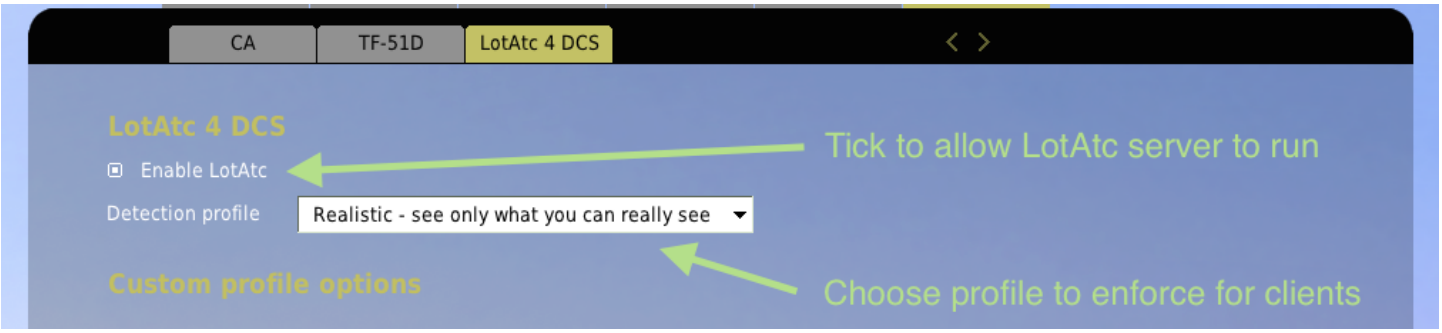
Page in progress for 1.0.0, net finished

Installation & Network configuration

See [[Server Installation Guide]]

First launch

After the server installation succeeded and you have configured the network access authorization, you must enable LotAtc server to run within DCS World (default setting is off).
To do this: Go to the DCS World Options page, then display the "Special" tab and finally the "LotAtc 4 DCS" sub-tab.
Tick the "Enable LotAtc" switch to allow LotAtc server to run.



Running LotAtc server

Well, it's pretty simple. All you have to do is to run a DCS server. As usual.

> *LotAtc server can only work if you're the DCS host for the mission. You cannot act as a LotAtc server if you're a client of DCS, nor if you're playing DCS single player mode.*

Being a DCS World module, LotAtc server is merged into DCS and will become live as soon as you launch a multiplayer host (provided you enabled it to do so in your Options>Special>LotAtc page).

> *Note: If there is no connected LotAtc client, then LotAtc server doesn't do much and thus won't hit your FPS or anything. Hence, from a performance point of view, you may let this switch enabled at all times. That's up to you.*

Options for LotAtc

DCS UI Options page

On the Options>Special>LotAtc page you may:

- Enable or disable LotAtc, as explained above.
- Set which [[Detection Profiles|Detection Profile]] your LotAtc server will use.

> *Those settings apply to all potential LotAtc clients that connect (or can't connect if you disable LotAtc) to your server. There is no blue/red specifics here.*

Outside DCS UI: LotAtc passwords

DCS Option page is not able to manage text fields at the moment.
Then, to change the passwords that LotAtc clients have to use to connect to your LotAtc server, you have to manually edit the **server.lua** file in your C:\Users\%USERNAME%\Saved Games\DCS\Scripts\net\ folder.

> *We advise you to use Notepad++ to edit DCS LUA files. Avoid using Windows' default notepad as it usually makes (not so...) "funny" changes to LUA files (changes that transform into bugs).*

Locate those lines at the beginning of the server.lua file:

```
local atc_add_options = {   --- Options that cannot be added yet in DCS Options
   red_password="red" ,
   blue_password="blue"
}
```

Set the password by replacing default ones (between double quotes). Passwords are case sensitive.

Save & exit the file.

FAQ

{{faq}}

Files

server_options.jpg	59.6 KB	05/13/2013	Azrayen
picture528-1.png	105 KB	02/10/2015	DArt

Shortcuts

Page in progress for 1.0.0

Globals

Shortcut	Description
Alt+N	Change unit from metric to imperial
Alt+C	Show/Hide detection/threat circles

Tactical View

Shortcut	Description
Left click	Move the map
Ctrl+Left click	Center the map on the cursor
Alt+Left click	Make a draw text item on the cursor (go in draw tab to modify it)
Right click	Measure line
Ctrl+Right click	BRAA line
Mouse wheel	Zoom/unzoom the map

On symbols or label

{TODO} Check clockwise

Shortcut	Description
Shift+left click	Move Label clockwise
Shift+Ctrl+left click	Move Label clockwise

On drawing

Shortcut	Description
Left click	Edit draw in the tab
Shift+left click	Move draw

On coordinates window on bottom-left

Shortcut	Description
Left click	Show/Hide details on cursor position

Main bar at the top

Element	Shortcut	Description
Unit	Left click	Switch unit between metric and imperial
Hour	Left click	Show/Hide seconds
Troller name	Left click	Open troller menu (show all trollers)
Profile	Left click	Show details on server config for current session

On color buttons

Shortcut	Description		
Shift+left click	Reset color to default	Mouse wheel	Set lighter/darker color

Documentation

[[Documentation|Start page]]

[[Get Client|Get LotAtc Client License]]

[[Payment FAQ]]

[[Download]]

General documentation:
(for LotAtc users & missions builders)
- [[Detection Profiles]]
- [[Features|LotAtc Features]]

User documentation for LotAtc server:
- [[Server Installation guide]]
- [[Server User Manual]]
- {{faq_server}}

User documentation for LotAtc client:
- [[Client Installation guide]]
- [[Client User Manual]]
  - [[Labels]]
  - [[Languages]]
- {{faq_client}}

{{faq}}